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Farm Department.

Conducted by J. H. BROWN, who lives on his farm at Climax, Mich., which is conducted as the MICHIGAN FARMER Experiment Farm. All correspondence for this department should be sent to Climax.

THE EDITOR'S FARM NOTES.

BARRACK FOR WHEAT AND CORN STOVER.

We are now hauling our wheat bundles and stacking in the new barrack. This cheaply made and quickly constructed affair is going to be thoroughly appreciated.

It is 22x32 feet, and 16 feet to the eaves, with steep roof made of good stock boards having 3-8x1-2 inch grooves on each upper edge. The upper side of those boards are also dressed.

The only cutting and fitting in constructing the frame is when setting up the rafters. The poles are 18 feet long, set two feet into the ground.

As the ground was not quite level, we used a plumb and spirit-level, and had no difficulty in doing a good job. Commencing at one corner, a white oak pole, from eight to ten inches in diameter, was set up in its proper hole and temporarily stayed by 2x6 girts the 12-foot girts to lap by the posts then another pole raised and set into the second hole, and stayed in like manner.

The poles were about eleven feet apart, or just the right distance for the 12-foot girts to lap by the posts and nail securely without sawing. Three girts were spiked on the first two poles, one at the bottom, one in the center and another near the top.

A sharp axe was used to hew off the bark and make a good face for spiking on the ends of each girt on the poles. We commenced at the highest corner and used the spirit-level on each girt, thus quickly placing and spiking them into position.

The girts and rafters are of hemlock, light and stiff. Both are 2x6 inches in size, while the nail ties are 2x4 inches.

For this barrack we have four poles on each side, also four more, 26 feet long, running through the center to support the ridge.

Having insufficient barn room for storing hay and wheat, these two barracks will pay for themselves each season. There is an immense loss each season, if at all rainy, where hay and wheat are stacked in the open air. Last fall we lost enough wheat, or rather had enough damaged, to pay for one-half the material used in this barrack. It seems to us that it would pay thousands of our farmers in this State to erect some such cheap barrack, when necessary to stack in the open air.

As to the durability of such a "cheap" structure: No. 20 wire nails were used to hold the frame together, same as in the hay barrack erected some eight years ago. The hay bar-

rack still stands plumb and stiff, though a miniature cyclone last August tore down four large apple trees surrounding it.

These nails never pull out of the posts; in fact we tried to pull off a girt and the nail heads pulled through the girt itself. Braces may be put on when needed, at any time when empty, and, as the posts decay at the bottom, the sides should be boarded up, if not before, as this gives the necessary rigidity to the entire structure. Verily, it would pay for brother farmers' to "swear off" on stacking hay and wheat in the open air.

ANALYSIS OF BEANS.

Will you please publish in the Farm Department the analysis of cooked beans? or what would be better, what shall we feed with our beans to make a perfectly balanced ration for three-months-old pigs?

Eaton Co., Mich. F. J. BAILEY.
The average composition of dried beans, to which we suppose you refer, is as follows: Water, 13.2 per cent; Protein, 22.3 per cent; carbohydrates, 59.1 per cent; and fat 1.8 per cent. Compared with corn, the latter has the following average composition: Water, 10.9 per cent; protein, 10.5 per cent; carbohydrates 71.7 per cent; and fat 2.1 per cent.

Without trying to figure out a balanced ration to go with the beans, we will "lump it off" by saying the first thing is to provide plenty of grass or green feed at this time of year. That is the most important of all for pigs three months old.

We should make a mixture of ground beans, shorts and bran, in about equal portions, or one of beans and corn equal parts to two parts of bran, all ground and soaked in milk or water from one feed to another. Only use enough fluids to make a thick stiff slop.

Feed this twice per day, and give some shelled corn once per day, preferably soaked, and at night. A good feeder watches his pigs and feeds accordingly. It is difficult to tell just how much to feed, but feed liberally, so that the pigs grow every day. At the same time be careful not to feed too heavily so as to spoil the pigs' appetite. Plenty of fresh water should be furnished at all times.

Oats and peas or clover are good at this time for such pigs, and the whole process of feeding now should be to build up a good strong frame, with only enough fat to round out into a sleek condition. Avoid feeding too much corn at present.

For The Michigan Farmer.

PROFIT IN FERTILIZERS.

It is not unusual to notice articles in farm papers questioning the profitable use of chemical fertilizers. The experiment stations generally say they may be used with profit, but that it is largely a matter of knowing how to use them correctly. The Rothamsted experiments in England have now been car-

ried on for more than fifty years, and with wheat every year on the same soil, they show that chemical fertilizers more than double the crop. Experiments made in this country usually tell the same story. For example, in Connecticut, experiments with a rotation of crops show that twelve dollars' worth of fertilizer gave rather a better return than twenty-one dollars' worth of farm-yard manure.

Fertilizers increase crops beyond all question, but it is easily possible to so use the fertilizer that the increased production will not pay the cost of the fertilizers used. With a proper use of fertilizers, 30 bushels of wheat per acre may be regularly gotten, where with the usual hit-or-miss way of using farm-yard manure only about 15 bushels can be depended on. Ten dollars' worth of chemical fertilizer, properly proportioned and properly used, will undoubtedly produce a crop gain worth far more than ten dollars. Twenty dollars, or even \$100 worth of phosphate alone applied per acre would not double a crop as compared with an unmanured acre, nor would an excessive quantity of potash alone prove beneficial. On the contrary, such applications would injure the crop and prove worse than no manure at all. The same is true of an excessive use of nitrogen without potash and phosphates. All of the reputable official fertilizer experiments show that complete fertilizers are necessary, and that potash and phosphates must be used regularly. Nitrogen may be largely obtained through the cultivation of clovers, cow-peas, field peas, etc.

For all grain crops the fertilizer must contain fully as much potash as phosphoric acid; a small amount of nitrogen is always advisable, but the farmer cannot afford to pay much money for nitrogen when he can grow his own so cheaply. For fruit and vegetable crops, the potash must nearly double the phosphate. It is needless to go into the actual fertilizer needs of different crops here. The principle experiment stations have frequently published tables of analyses of the principal crops, and farmers will do well to consult these tables.

After having determined the proper proportions of fertilizers for a particular crop, we come to a matter of fully equal importance—the proper time to use them. All forms of nitrogen should be applied closely about seeding time. Good growing weather means good weather for making refuse ammoniates available. In the case of nitrate of soda, applications are frequently made after seed planting. Potash and phosphates should be used before seeding, preferably some months before. For example, if it is intended to follow your corn this year with crimson clover, the potash and phosphate should be broadcast as early as possible after the corn is seeded. There is very little danger of loss from drainage, and by the time the young clover is ready to use

the mineral fertilizers to enable it to store up nitrogen, it will find them at hand in forms suitable for immediate assimilation. By all means apply the mineral fertilizers for next year's early potatoes late the coming fall; it is perfectly safe to apply in the fall, and perfectly safe to broadcast. For wheat, use a fertilizer containing, say 2 per cent of ammonia, 6 per cent of potash and 6 per cent of phosphoric acid, applied with the seed. Next spring, apply 150 pounds of nitrate of soda per acre as soon as the last snow is well out of the way. This is the way the French farmers get the 80 bushels of wheat per acre, which seems almost impossible to our farmers. Mix right and use right solves the problem of fertilizing with chemicals, but do not feed niggardly; don't try to get something for nothing.

S. PARSONS.

For The Michigan Farmer. A PORTABLE HORSE POWER FOR THREE DOLLARS.

Following is my plan for constructing a portable and cheaply-made horse power for one or two horses, and one that is firm and always in order: It is easier on a horse than any tread power, and cannot be broken.

It is made from an old wagon wheel. The tire must bend to form the base; take two fence posts, 4 feet long, 8 inches in diameter. Halve them in the center and drive them tight together. Then make a mortice, 2x4, and 3 inches deep in the center.

Next cut the old wagon axle across in the center and make a tenon to fit the mortice. Insert it and put in four firm braces and the base is ready.

For making the rim, get 140 feet of lumber, one inch thick and 6 inches wide (for 14-foot diameter wheel), and eight 3x3 pieces of hard wood for arms. Make a round one-inch tenon on one end of arms.

Next bore in the hub a one-inch hole between every other spoke. Insert the arms, after boring a quarter-inch hole through the felloe and arm, and fasten with a bolt. We used a wire spike and clinched them.

Draw the circle and cut the lumber about two feet four inches long, and take four-inch wire nails and spike three tiers together, leaving the center (or second tier) one and a half inches back from the other two, so as to leave a groove for the rope to run in.

Be sure and break the joints of lumber in proper places before nailing together, so the rim will be firm when completed. We made a hinge door, two and a half feet long. But I believe if we erected the wheel only two and a half feet high, and made a solid wheel, and walked the horses over, and let them walk around with their front feet over an arm, which would be sufficiently high to be safe, it would make a better wheel. We shall try this plan later on.

The door is to back the horses in and hitch.

It requires fifty (or more) feet of three-quarter-inch rope, according to circumstances, and some times requires a trolley or two to keep it in proper place while in motion.

To secure the power firm with stakes we advise nailing on the side of the sills, at each end, a scrap iron ring, and drive a long stake in each, which being larger at the head, will not drive through, and will hold the power down tight.

By taking off the nut two men can carry the rim, and the base being separate, it is light to move when desired, and is "set" in five minutes.

If material is on hand, a man can make this complete in a day and a half, and no cheaper, firmer or handier horse power was ever made that could compete with this one; and we honestly recommend those desiring a power to give it a trial.

Huron Co., Mich.

R. A. BROWN.

CRIMSON CLOVER A SUCCESS.

Seeing some inquiry about Crimson clover in The Farmer of July 10th, I will relate my experience for the last two years.

On the 26th of August, 1895, I sowed three acres to Crimson clover, as I thought on a clean piece of ground. It came up very quickly and was growing nicely, to my great surprise. In about a week after the sorrel came up very thickly, and at harvest time (June 20) it was hard to tell which was intended for a crop, except about one-third of the piece, where the sorrel was not so thick. That stood from 16 to 20 inches high and very thick.

I cut it for seed and got ten bushels. I was so well pleased with it that I sowed 25 acres in August, 1896. It grew finely from the first (I think it will stand the winter as well as wheat), and when in full bloom stood 22 inches on an average, a large portion being from two to two and one-half feet high. The highest that I measured was fully 32 inches.

I cut it all for seed. Have hulled 14 acres and got 130 bushels. Seven acres yielded 73 bushels. I shall sow 40 acres as soon as I can get it in. I think it a grand success in Kalamazoo and St. Joseph counties.

M. F. WOODWARD.

Kalamazoo Co., Mich.

(We have lost our seeding of red clover on one field, and it knocks us out in our rotation for another year. Consequently we shall sow a portion of this season's corn ground to Crimson clover some time next month, then plow under and plant to corn again next spring. Possibly Crimson clover and barnyard manure may help secure the necessary fertility for the second crop of corn on the same ground.—Ed.)

For The Michigan Farmer.

GROWING MILLET.

This was not sown until the 28th of June, as everything had to give way to gathering and marketing the strawberries. The ground was strong and new and was carefully plowed early in May, and fitted soon after. About the middle of June it was disced, floated and harrowed, thoroughly disturbing and destroying all weeds. Finally, on the date given, it was sown very evenly by hand, on a dry, dusty seed bed, a little over five pecks being used upon two acres.

This would be considered light seeding by seedsmen, some advising a whole bushel per acre, but the seed was perfect and showed so plainly to be enough as it lay before harrowing, that I did not cross sow it, as I had intended to do at first. As I said before, the soil is strong and I look for a fine crop. A magnificent shower came the next day and the seed will have a fine start over the weeds.

LATER.

Since writing the enclosed article I have been back and looked at the millet. I find it is up and some plants have started a second leaf. It is, as I expected, sufficiently thick and I am glad to say remarkably even.

I sowed twelve feet at a cast, pacing eight paces at each moving of the stakes. I took at each cast what conveniently lay in my hand with the fingers brought together at the tips, casting at each alternate step in the usual way. It was a hot morning and I walked slow, so the double step probably did not make more than five feet to a cast in the direction in which I walked. This measurement gave, as I stated, nearly five-eighths of a bushel per acre.

I am thus particular in giving the data of sowing, because there are many who cannot get or have not got seed sowers, or, like myself, do not sow fine seeds enough to warrant the purchase. My father had a Cahoon or fiddle seeder, and my son sowed for him, using the machine, and we also tried it but failed to get as even or regular seeding as I can do by hand in the way I have stated.

We are having very hot weather, with pretty fair rains once a week, and everything is booming. Contrary to expectation six weeks ago, the hay crop is going to be immense, and hay which sold fairly well at \$9 a ton June 20th, would not now bring more than \$6. Hay directly from the field has been sold I am told at \$5.

Ohio.

L. B. PIERCE.

HAY-MAKING IN FRANCE—THE MAIZE CROP, ETC.

From Our Paris Correspondent.

Paris, July 13, 1897.

The making of hay has made of late years very notable progress in France. Thanks to the syndicates, mowing machines and the horse rake are brought within the reach of all who desire to unite to either purchase or loan the machines. The proper moment at which to cut the grass is not so much better known, as acted upon; that moment is when the grass is in flower, and the nutritive principles concentrated in the stems, and not absorbed by the seed. The juicy grasses are the most nourishing, but if cut too soon they will be too aqueous—a fault to be avoided, and the drying will be retarded. Whether the grass be cut by the ordinary scythe or the machine, it ought to be mown as near as possible to the soil. In moist meadows the rule is to cut a little high, but that is to withdraw the grass from the humid action of the soil, which would add to the difficulty in drying the grass. In fields well cared, that is exempt from stones and mole-hills, the cutting ought to be executed uniformly. In hand mowing, and where the men are paid by piece work, the tendency is to scamp the cutting of the tuft or undergrowth grass, hence high cutting, loss of yield, and difficulty for the aftermath to pierce rapidly the stubble. Only the farmer's eye can correct that negligence.

The process of drying ought to be methodical, and have in view to expel a part of the water in the plants by evaporation. The fork, hand-rake, or machine, will secure that, but in the case of clover, lucerne, sainfoin, etc., the aeration must be conducted with care, as the leaves drop off very easily. Care should also be taken not to allow grass, partially dried, to receive rain or even abundant dews. To guard against such drawbacks, the grass is made into small cocks every evening, to be opened out next morning after the sun has driven off the dew. On the evening of the second day these cocks are increased in volume from 50 to 100 lbs. of hay, and the third day, ricks are indulged in, containing 10 to 15 cwt. of hay; if the next day be fine, and the hay has "thrown off its fire," that is, slightly fermented, it can be definitely stacked or barked; or if near a town and intended for immediate consumption, made up into bundles of 50 or 100 lbs. for delivery. In any case these operations must depend on the reigning weather, the nature of the grass, and the humidity of the soil. As a rule hay-making exacts celerity. When the hay is machine-made, the cutting and drying per acre is about 5 francs per acre; if hand-saved, it can cost 14 to 20 francs, following the supply of manual labor. When the haymaking season is wet, the plan is to allow the grass, in the case of natural meadows, to remain in the sward, turning continuously, so as not to allow the underside to whiten. For artificial meadows, recourse is had to making the grass into sheaves and stacking like corn. Good hay cannot be stored too promptly; if for the stack to last 12 or 24 months, the hay ought to be uniformly pressed, trampled; empty spaces guarded against, as these lessen the nutritive and commercial value of the hay. Salting is optional, but if the hay has been incompletely saved, it is a necessity; 20 to 35 lbs. per ton of hay is the dose.

A word about the mowing machine that is so often anathematized; only let it be worked by an intelligent person; keep it in good order when operating, and when the season is over, shelter it against the inclemency of the weather; examine it if it be in need of repairing; if any joints have become

loosened, or pieces broken or worn out. Have the mower ready for working ten or fifteen days in advance. By having it in apple-pie order after its season's work has been finished, there will be no delay in preparing for the next. In order to combat against the great neglect of farm implements and machinery after their duty has been done, some syndicates employ skilled artisans to clean up and repair them, ere they be laid aside. Natural meadow hay varies very much in price, but then it is the output of a variety of soils, from the fine, odoriferous, and nourishing grasses of dry and elevated meadow land, down to the humid acid, and marshy soils, whose hay is coarse, short, deficient in plant food, and so in alimentary elements. The hay of the South of France and of mountains, is more nourishing than that of the North, with its narrow and humid valleys—natural meadow understood; but these conditions can be dependent on the humidity of the atmosphere, and the nature of the culture or top-dressings employed. Meadow hay well made has a pleasing green shade and an agreeable odor. A darkish tint does not imply any superior nutritive value, but suggesting the action of a prolonged humidity. The aroma will excite the appetite of stock, and if well made, the hay will remain sound for 18 months; if the contrary, it becomes "dusty;" in the latter event it ought to be well shaken before being given as feed, and so increase its nutritive value 50 per cent. If the hay be given too new, it is apt to heat the animals. Artificial hay, as furnished by lucerne, sainfoin, crimson and violet clover, vetches, grey peas, etc., exact much care in drying; lucerne, a favorite forage crop in the South of France, is accepted as more nutritive than the best meadow hay, and sainfoin is as good as lucerne hay if the leaves can be preserved without whitening. Sainfoin is the plant most easily transformed into hay, as its organism contains least water. Violet clover hay should have its leaves; be of a yellow brown color, of an odor recalling honey, and of a sugary flavor. Crimson clover is rarely made into hay; in order to secure its leaves the plant must be cut when in rather early flower, and protected from the action of the sun. Its hay is light; in color, greenish white; cattle eat it with avidity, although it be very inferior in point of nutritive value as compared with the other forages; vetches, etc., require to be cut just when coming into flower, rapidly dried, stored in a barn, and well pressed down.

Natural meadows yield their aftermath in the month of September; the stems of the grasses bear neither flowers nor seed; the grass has a darker tinge of stem, which at some time is more soft and shorter. Its nutritive value largely depends on the state of the weather during drying. Lucerne is the plant that most readily yields a satisfactory aftermath. Sainfoin and crimson clover give no aftermath; they are fed down.

Maize is a forage plant increasing in popularity; its culture is rapidly extending in Belgium, but where the seed is not expected to ripen on account of the inadequate temperature. It exacts a soil of deep tilth and of rich quality; a soil that can retain warmth, anything like stagnant humidity tells against the culture of maize. For a regular soiling crop, the maize succeeds wheat; the skim plough is run over the stubble, farm yard manure ploughed in, and later, before winter, the deep ploughing takes place. In spring the scarifier, harrow and roller will do the rest. As the crop is never laid, and the plant is a voracious feeder, in potash especially, it can be liberally supplied with fertilizers—basic slag, kainit, phosphates and nitrates. Any time between the middle of May and the middle of July the seed can be sown; if too early, it will suffer from frost, if later, the autumn frosts will destroy it. The seed can be sown broadcast or in drill, and thick, rather than thin sowing will give more tender stems. One or two weedings, or an earthing up following mode of seeding is all the after culture required; six to ten stones of seed per acre are sufficient; the variety, which ought to be changed every second year, that is, obtained from a different locality or region, is the Caragua, or the horse-tooth. The yield of green stuff can be 24 or 40 tons per acre. In France maize succeeds early potatoes or spring vetches or rye. The soil is well manured and the maize is cut and put into silo on the first appearance of frost.

It is reported that an English company with unlimited capital intends to embark in the French egg, butter and poultry trade, feeling assured that with the facilities afforded by the French railway companies and cargo boats, these products will be able to cut out Denmark, Russia and Belgium in the London and provincial markets. The company will have resident buyers in France, who will make contracts with French producers, and accept their counsels for bettering out-turns. If necessary funds will be advanced. The success of the scheme will depend on the agents charged to distribute the imported products. The wonder is that England does not take the industries in hand herself.

HOME-MADE FERTILIZER.

Having some ashes of our own, I thought I would like to make a fertilizer for my own use. Could you give me a formula that I could use with the ashes?

I went to the drug store with the book on fertilizer analysis, but they did not seem to know what form the things were in. They said there were so many forms the ammonia was in.

The book says: Available phosphoric acid, nitrogen, estimated as ammonia, insoluble phosphoric acid and potash. They said that they did not know which kind it meant. If you could give us a formula it would oblige me very much.

NATHAN FULLER.

Macomb Co., Mich.

In reply to your query, which we handed to Dr. R. C. Kedzie, we append the following:

Wood ashes need no preparation or addition, except to add them to the soil. They contain all the mineral elements necessary for plant life, and in a form so divided that the roots of plants in the soil can readily lay hold of them.

So far as mineral matter is concerned, they are an all-round manure, and require no preparation. The material they lack is nitrogen in available form, which may be supplied by stable manure. They are especially beneficial on open, porous soils.

R. C. KEDZIE.

Mich. Exp. Sta.

DESTROYING HORSE-RADISH.

I see in a recent issue R. F. Child inquires how to kill horse-radish.

If he will make a strong brine and pour some into the center of each plant it will finish it. Make the brine strong and use plenty of it. The job is a slow one but sure.

Eaton Co., Mich.

S. H. HICKS.

For the Michigan Farmer.

DIGGING POTATOES.

The man who has continued to make a profit in his farm operations throughout the era of low prices that has existed for the past several years, is the one who has reduced the cost of production. The first element to be considered is always labor. Anything which will save labor will reduce the cost of production. This rule will apply to every avocation of man, and the farmer is no more exempt from its action than the manufacturer.



The potato grower who has made money in the past few years has been the one who has reduced the cost of producing the crop to a minimum. It is a well known fact that the greatest item of cost in producing a crop of potatoes is in the harvesting or digging, and the man who has employed hand labor for this purpose found little profit left from the crop. The introduction of machinery designed for this purpose has served the two fold purpose of reducing the cost of production and stimulating and increasing the industry. It thus transpires that the man who grows potatoes, and does not own a potato digger is not living up to his full privilege and is not doing the best that he may do.

Among the machines designed for this purpose, we know of none that stands out with more prominence than the Hoover Digger, manufactured by Hoover, Prout & Co., of Avery, Ohio, a cut of which we show herewith. It digs potatoes, shakes out the dirt, separates the tops, weeds, etc., and delivers them to one side, leaving the potatoes behind the machine in a narrow row on top of clean ground ready to be picked up. It is strong and durable, being constructed of the best material throughout. It will dig potatoes in all kinds of ground and it will last a lifetime. What more could mortal man want? Write these people for catalogue and prices and tell them that you saw this in the MICHIGAN FARMER.

Island Lake, Lansing, Grand Ledge Excursions, Sunday, August 1st.

D. G. R. & W. R. R. train will leave Detroit at 8:00 a. m., and leave Grand Ledge at 6:30 p. m., Lansing 6:55 p. m. Round trip rate—Island Lake, 50 cents; Lansing, \$1; Grand Ledge, \$1. Colored folks Camp Meeting at Lansing; Spiritualists Camp Meeting at Island Lake and Grand Ledge. GEO. DEHAVEN, G. P. A.

The Dairy.

We have a complete Dairy and Farm Creamery in constant operation on the Experiment Farm at Climax, Mich. This is personally conducted by J. H. Brown. All dairy correspondence should be sent to Climax, Mich.

TAINTED MILK.

When milk ferments it is tainted. It is then in a dangerous condition. I consider tainted milk as unfit for manufacture or use in any shape. This undesirable state is acquired usually in one of two ways, either by some bad food the cow has eaten, or by absorption by the fresh fluid of odors from the atmosphere.

Lactical acidity and fermentation are two opposite factors, and often we find one fighting the other in the milk vat.

It is an interesting contest to watch, as one will sooner or later gain the ascendancy. In such a plight the manufacturer always encourages acidity, as it is his only salvation for making anything out of the milk. Even then the fermentation taint always leaves its indelible stamp on the cheese or butter quality, ruining or impairing its edible and commercial value.

In the care of milk on the farm, dairymen should be specially educated to preserve it free from this dangerous degenerative change.

To show how susceptible milk is to bad odors, let me illustrate by one of the many cases that have come under my observation. An extensive dairyman, milking some forty cows, was in the habit of leaving the milk on a stand over night half way between the barnyard and his dwelling house. In the meantime a privy vault was opened in the vicinity, and no particular pains were taken to sterilize the excavation or deodorize it. The milk from that farm took on such a horrible taint that its receipt at a neighboring factory promised to ruin the quality of the whole cheese-making there. An investigation of so flagrant an outrage quickly followed, and as soon as the evil was remedied the milk resumed its normal quality.

But it is the little sneaking taints that do not get investigated, and are almost daily condoned, that do the mischief. They are always the result of careless or improper methods somewhere, and they steal away a naturally delicious milk, cheese or butter flavor, to replace it by one that is distasteful to any normal palate. What is more, it should be remembered that tainted milk is more or less poisonous, and at the best is always unhealthy. The dangerous "ptomaine, tyrotoxin" finds in this milk condition a fertile field to develop.

Now, a word to dairymen about milk-care in hot weather. Doubtless you have had words of caution on this subject thrown at you until many of you are callous, so to speak, to any new impressions. But I assure you that this is a live topic that must not be ignored. In the care of milk you must perpetually perform tomorrow and next day what you should be doing now, giving it scrupulous attention. Do not tire of constant repetition in well doing, for such is the life of prosperous and successful dairymen.

Aeration of milk freshly drawn, and in a pure atmosphere, should be regularly performed wherever it is to stand any length of time in bulk. In my opinion, based on practical experience, it is immaterial whether this be done by stirring, dipping, or running through a patented aerator, provided the milk be brought in contact with pure air. Aerators are all right, provided you are sure that they do the work. Many dairymen using them labor under the impression that the utensil will do all the work by a single contact of the milk. Depending upon it thus, as a result they get some spoiled milk on their hands. The facts are that most of the aerators, being simply economizers of labor, require that the milk be run through them several times instead of once. The judgment and experience of the dairyman alone, aided by the thermometer, must determine when milk can be safely allowed to stand over night, with a prospect of its being sweet and pure in the morning.

GEORGE E. NEWELL.

(American dairymen as a class do not take the pains to preserve cleanliness in all the daily details of handling milk and its products, as do European dairymen.)

It has been found that poisonous ptomaines are much more common in

this country than in Europe. Dr. Vaughan, of our University, has found over 300 cases of cheese poisoning in the last two years.

When it is known that the poisonous alkaloid, called tyrotoxin, is produced from and through the agency of putrefactive organisms that get into milk, it behooves every dairyman to make strenuous exertions to prevent any impurities from inoculating this valuable product which enters so very largely into human consumption.—Ed.)

For the Michigan Farmer.

PRODUCING AND DISPOSING OF BUTTER.

Possibly some of the readers of this department were inclined to raise their brows when they read the editor's comment, in a recent issue, where he stated that he preferred oleomargarine to eating much of the so-called butter that is produced on some farms. This may be a little hard for some to take, but those who have had even a moderate amount of experience with the two combinations to which the editor refers, will generally admit that he is nearer right than wrong.

This is a severe statement to make, and for many probably a harder one to believe, but the writer has eaten what passed for butter in places where we had the best of reasons to believe that it was nothing more than oleomargarine, yet, under other circumstances, a critical observer would scarcely have appreciated the difference. This is more than can be said of some so-called dairy butter often seen at the average grocery store. It is difficult to see wherein the latter exceeds the former.

It would seem that the annual depression in prices for butter would begin to make the average farmer think that it was nearly time for a change to be made somewhere. But it is, obviously, not the case as every year at about this time, the market is flooded with an abundance of seven-cent butter.

If the way out of the difficulty was cumbersome, then there might be a reason for the average farmer to continually rub along in the old rut. The way to better prices is clear and in the reach of every farmer, and, in a nutshell, is to produce a first-class article and secure well-to-do city customers who appreciate good butter and are willing to pay for it.

This is but the doctrine that is continually taught in this department repeatedly, yet, we believe it to be a long step towards the successful solution of the problem. At any rate, the writer has yet to learn of the first instance where the producer has tried this method and then returned back to the old way of making and of selling seven-cent, country grocery store butter. Ordinarily, the price from double to triple the market value of butter during summer months, is considered to be quite sufficient to compensate for the extra thought and care necessary to produce a first-class grade of dairy butter.

Indirectly one of the first requisites to successful dairymen is feed and feeding. To the farmer who wishes to produce a first-class grade of butter, taking into consideration quality, quantity and an economical cost of production, the silo should be given at the least a careful consideration.

We have tried the old method of dry foddering and the new, and the writer can truthfully say that, were we obliged to go back to the old way of doing business, we would feel that it was a long step in the wrong direction. The writer is well aware that there are others who hold quite different views on this subject, but from practical experience, this is ours.

It is doubtless altogether useless to remind the average farmer of the great importance of feed, at any rate, such ought to be the case. We might think of the cow as a machine, wound up to run so long. She is prepared to convert so much into butter fat; whether or not she does it depends on the owner. She is certainly prepared to do it and it is the feeder's fault and his loss, if she is not given the opportunity.

It is a question with a strong affirmative, if it does not pay a good interest to dispose of considerable ground feed in this way, even if it has to be purchased. The writer has in mind farmers who do buy feed for the cows and as they are practical farmers whose livelihood depends on their success and failure, it doesn't seem reasonable that this would be followed unless there was profit in it.

Under butter making, the writer has

only one comment to make, and this is in regard to butter color. There is quite a difference of opinion among butter-makers as to the right or wrong of this practice. Yet, considering that butter color does not add to the grain, quality or quantity, but renders the butter color more uniform the year round, hence, more pleasing to the eye, it doesn't seem to the writer that there is the wrong here that some are inclined to suppose.

If it really made the butter something which it is not, as flavoring or adulteration would do, then it might seem and would be radically different. It doesn't seem logical to the writer, that a butter color, which does not color the buttermilk, and leaves absolutely no scent or taste, and which, when properly applied, can not be detected short of a chemical analysis, is wrong.

If there is anything in the butter line up to a certain point that is displeasing to the writer, it is white or whitish butter, no matter how fine the quality. But of course we all have our respective ideas on the subject, and it is doubtless our duty to be guided by them.

Probably the next important feature is the customers. To the average farmer, this will not prove a serious matter. We are situated within a few miles of a small city, of perhaps ten thousand inhabitants, and have little or no trouble in securing first-class customers for almost any amount that we care to supply. Doubtless the majority of farmers are similarly situated. If such is the case, it is to their advantage. Probably many are even better situated. The writer would judge, to a certain extent at least, the larger the city, the more favorable the prospects for better customers.

The person who aims to produce a first-class quality of butter should seek first-class customers for the same. The latter will be found by far the more satisfactory in the end. As suggested above, they are the ones who appreciate a good thing and are willing to pay for it. Obviously, these are the kind the farmer wants.

The price of butter obtained is something that must be governed by circumstances. Our minimum price is about two or three cents above double the present market price, which we are informed is seven cents. During the winter months, it is about three cents over and above the highest market price, with the exception of that which is contracted for by the year, which is taken at a fixed rate.

To a certain extent, a fixed price by the year is the most satisfactory. Contracts are preferable to an amount which a person has a reasonable prospect of being able to supply without failure.

C. P. REYNOLDS.

Shiawassee Co., Mich.

(We saw some poor "store butter" a few days ago, and found out just how it was made. The poor woman who made it was a hard worker. Two cows furnished the milk, both coming fresh in late spring. The milk was set in open pans on the bottom of a cellar that is reeking in a combination of smells.)

Each pan of milk is skimmed twice during this hot weather in order to secure all the cream. The stench from the pans before the second skimming was made was fearful.

The cream was kept in a crock until enough was collected to make a "good sized churning," as the woman said. This cream was actually rotten when churned. The churning was done in the yard in the open air. No ice was used to cool down the cream, and the "grease" taken out of the cream was full of stinking buttermilk (?) and enough to make one sick to look at it from a distance.

This fearful combination of pollution was turned into a crock and traded at the village store for groceries. More than a score of times has the merchant dumped such a stinking mess into a hole in the ground. Unless too bad, he takes it in exchange for groceries, for the woman's custom must be kept, if possible.

Such butter as this is made in every neighborhood in the country, and many readers of The Farmer can recall one or more cases. We do not believe any reader of this paper has a hand in the perpetration of such greasy pollution, but some of your neighbors have, and what are we to do about it? As not one farmer in a score throughout the country takes The Michigan Farmer, or any other farm journal, it is evident that a great deal of missionary work is needed. Dear reader, can you not hand your copy of this paper to one

neighbor who does not take it and induce him to try it for a year?—Ed.)

SOME COWS IN NEWAYGO COUNTY.

I send you a record of my cows for the last 15 days of May, if it is good enough to publish:

My herd is a mixture of breeds. No. 6 is a Holstein and Durham cross. No. 4 is a calf of No. 6, from a Hereford bull. No. 5 a well-bred Durham. No. 2 is a half-blood Jersey, and No. 3 is mostly cow.

They all suit me, except No. 2; she is not up where I think she should be.

	Time of Calving.	Amt. for 15 days.	Average daily meas.	Test per 100 lbs.
No. 2—Dec., 1896.....	310 lbs.	29 lbs.	4.6	
No. 3—Apr., 1896.....	310 lbs.	29 lbs.	4.6	
No. 4—Jan., 1897.....	559 lbs.	37 lbs.	3.4	
No. 5—Apr., 1897.....	683 lbs.	45 lbs.	3.6	
No. 6—Feb., 1897.....	608 lbs.	40 lbs.	3.8	

W. C. STUART.

Newaygo Co., Mich.
(No. 2 is now making 1.07 pounds of butter per day, after being milked nearly seven months. By a singular coincidence No. 3 tests and yields the same. Her quality is good, but her flow of milk is less in proportion to the time she has been milked.)

No. 4 should yield 1.47 pounds per day. No. 5, 1.89 pounds, and No. 6 1.77 pounds of butter per day, providing good work is done in skimming and churning.—Ed.)

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Live Stock.

CLAIM TOO MUCH.

A good many agricultural papers are announcing that science has finally discovered that Texas fever is caused or spread by a tick, and that hereafter Southern cattle will be dipped to rid them of ticks, just as sheep are. All of which we accept, except that science discovered the cause of the disease. Back in 1869 and 1870 many practical cattlemen, after investigation, declared that the ticks from Texas cattle spread the disease to Northern cattle. We remember the learned essays written and published by eminent authorities at that time to show the foolishness of such statements. And these men actually wrote so convincingly and learnedly as to stop investigation in the direction which has since been proved to be the right one. Hence for 25 years the heavy losses from Texas fever are largely due to the result of the refusal of scientists to accept the investigations of practical men as of any value. Now they have finally concluded that these cattlemen were right, that their statements were in accordance with science, and therefore ticks can be proceeded against now that science has accorded the practice its endorsement.

This is not the first, nor will it be the last, instance in which the results of investigations of practical men have been entirely ignored by men who claimed to be scientific investigators, and who have afterwards had to acknowledge that their own theories were incorrect. This, however, is no reason why the teachings of true science should be ignored. It only shows that narrowness is as prevalent among so-called scientists as in the ranks of the plain people. The fault is not with science, but with those who claim to be her exponents. The practical man, having no theories to warp his judgment when investigating questions relating to his own particular business, is really in a better position to arrive at correct conclusions than the man of much greater learning who starts his investigations cumbered with theories. He is always trying to make facts fit his theories, and is prone to reject those which do not. This accounts very largely for the fact that discoveries and inventions seldom come from the scholar and scientist, but from the ranks of the masses, where thought has not been put in leading strings, and theories covered with the moss of centuries are unknown.

SECRETARY WILSON AND THE AMERICAN HOG.

If Secretary Wilson and his assistants are entirely lacking in knowledge regarding sheep and wool, it is quite certain he is "away up" on hogs. Coming from Iowa, the great hog state of the Union, this was to be expected, and his ideas on the hog as a money-maker, and the best methods to grow him in the most economical manner, are therefore worth heeding. Here are a few of them:

"The hog grows cheapest on the pasture and beside the fields that grow his grains. He is most profitable as a subordinate department, because he cannot consume the coarse fodders of the farm. He furnishes the best market in which to sell the by-products of the mill and dairy. He assimilates more of the most concentrated feed stuffs than any other animal of the farm. Quicker returns come from him than from horses, cattle or sheep. He pays the rents in European countries, lifts the mortgages in the Northern States, and in conjunction with the cow he will redeem the worn-out cotton and tobacco fields of the South. Avoid permanent residences for the hog; move him about, so that his environments may be clean and uncontaminated by germs that develop rapidly where they have suitable media. Avoid close breeding, as it intensifies predisposition to disease. Select your breeders from good milkers, as this is the best indication of fecundity.

"No agricultural people thrive who buy grain or meats and pay for them with the price of other farm products.

"We compete now, through improved and cheapening transportation, with all the world. The farmer is most independent who finds at least sustenance for his family from his fields, flocks and herds."

A SINGULAR CLASSIFICATION FOR SHEEP.

There is to be a sheep exhibit at the Tennessee Centennial on September 18, the entries for which closed July 15. The arrangement and classification of the various breeds must have been made by a Tennessee lawyer or an Arkansas hog raiser. The breeds and amounts offered are as follows: Dorsets, \$360; Merinos, \$360; Oxford Downs, \$360; Shropshires, \$360; Southdowns, \$360; Lincoln Cotswolds and Leicesters combined, \$360. The three long wool breeds are classed together, and the judge who is called upon to an Arkansas hog raiser. The breeds in competition will have his work cut out for him. He is sure to get roasted in any event. The same is true in the Merino class, where American Merinos, Delaines and Ramboulllets will struggle for supremacy against each other. It will be a wild woolly time if there is anything of a show. Think of all these classes of Merinos competing for the same amount of money as the Southdowns! The Hampshires are not thought worthy of notice, yet there is no question of either their merit or popularity. The Dorset and Southdown breeders and the breeders of Shropshires and Oxfordds can afford to go, but the breeders of Merinos cannot. Neither can the breeders of Longwools, who will not care to have their breeds made ridiculous by comparing them with other breeds. It is a wonderful classification and should have included goats, cats and long-haired dogs.

LOSSES OF SWINE FOR 1896.

The following table is from the statistical division of the Department of Agriculture, Washington, D. C., showing the number of swine losses in percentage and numbers:

States and Territories.	No. of swine.	Per cent.	Losses.
Maine	76,835	2.3	1,767
New Hampshire	55,272	2.3	1,271
Vermont	76,215	2.4	1,829
Massachusetts	58,297	1.8	1,049
Rhode Island	14,289	2.3	329
Connecticut	53,737	2.5	1,343
New York	632,524	3.2	20,241
New Jersey	153,437	3.2	4,910
Pennsylvania	1,022,773	3.1	31,706
Delaware	49,559	5.3	2,627
Maryland	331,886	5.8	19,249
Virginia	995,605	7.5	75,670
North Carolina	1,455,892	9.8	142,677
South Carolina	1,096,968	9.1	99,324
Georgia	2,012,868	10.2	205,321
Florida	415,007	10.8	44,922
Alabama	1,885,876	14.0	264,025
Mississippi	1,998,978	15.2	303,845
Louisiana	790,961	27.5	217,514
Texas	2,944,065	11.6	341,512
Arkansas	1,375,586	21.0	288,873
Tennessee	1,796,104	13.8	247,862
West Virginia	371,292	7.0	25,990
Kentucky	1,604,164	15.6	250,250
Ohio	2,284,962	10.8	246,743
Michigan	713,487	3.5	24,972
Indiana	1,340,335	23.8	319,007
Illinois	2,249,401	14.5	326,163
Wisconsin	902,507	3.3	29,381
Minnesota	521,690	9.2	47,995
Iowa	3,737,970	32.9	1,229,792
Missouri	3,074,329	16.7	513,413
Kansas	1,659,722	10.8	179,250
Nebraska	1,263,931	15.9	200,965
South Dakota	158,493	14.4	22,819
North Dakota	120,308	4.8	5,785
Montana	51,045	4.3	2,195
Wyoming	17,784	.8	142
Colorado	22,716	2.7	613
New Mexico	31,151	5.8	1,807
Arizona	26,076	9.0	2,347
Utah	53,790	3.0	1,614
Nevada	11,126	1.5	167
Idaho	75,182	4.1	3,083
Washington	210,683	3.6	7,585
Oregon	240,051	3.5	8,402
California	437,163	5.2	25,332
Oklahoma	78,514	5.4	4,240
Total	40,600,276	14.4	5,846,098

Losses from all causes, chiefly cholera, average 14.4 per cent. for the country at large, as against 12.7 one year ago, and 9.2 in 1895. The lowest death rates are returned from the North Atlantic, Rocky Mountains and Pacific States; the highest, 32.9 per cent. from Iowa, Louisiana, Arkansas and Indiana return percentages of 27.5, 21, and 23.8, respectively, while the cotton States, Kentucky, and every State contiguous to Iowa, except Wisconsin, exceed 9 per cent. Within the past twelve years the nearest approach to the heavy losses shown by this report occurred in 1887, when the percentage was 13.4, a loss of 13 per cent. having been suffered in 1886. Excepting these years and 1896 losses during that period have averaged a little more than 7 per cent. to the year.

The condition, 90.8, is not far from the average condition of this stock in previous Aprils. To cholera, which has been the most prevalent disease, is largely due the divergence from the normal standard. Food has been generally plentiful and cheap, and this has offset in a measure the effects of disease, putting healthy stock in prime condition. In ten most important

States Iowa has the lowest condition, 83, while five others show figures below 90.

In the face of the large losses returned from many important States, it is perhaps remarkable to find the number of breeding sows now on hand at as high a figure as 92.7 per cent. of the number a year ago, but the profits on grain in the shape of pork have continued large enough to urge the farmer to further effort even in the face of much discouragement. Correspondents state, too, that as a general rule greater care is given breeders than common stock. They are more isolated, and as a result the mortality for this class is considerably less than for other swine. As might be expected, Iowa shows a lower percentage (81) for breeding sows than any other important State, though Texas (82) comes near it, and two less important swine raisers fall below 80. A number of sows equal to that held a year ago is reported from seven States and Territories, the leading ones being Illinois, Wisconsin, Kansas and Nebraska, which range from 100 to 103 per cent.

HOW TO PREPARE WOOL FOR MARKET.

From Our Special English Correspondent.

In these days of agricultural depression and general keen commercial competition, it is absolutely necessary that those who intend to make any profit, or indeed, to survive in the great race of "the survival of the fittest," should thoroughly understand their business, and be enabled to use all the means which will commend all their wares to the best market and in the best possible condition for obtaining the highest price. In no business is the necessity for this more clearly seen than in the proper preparation of the wool for market. It is not too much to say that there are thousands of pounds per annum wasted by sheep owners which might easily come into their pockets if they only exercised the ordinary care and circumspection which are absolutely necessary to the successful treatment of their wool for the consuming markets. In order, therefore, to give wool growers some reliable information upon this important subject, I would ask their attention to the following practical suggestions. Study them well, and by an application of them, better returns for clips can be confidently looked for:

(1) The fleeces as soon as taken from the sheep, should be placed with the outer surface upwards on a table, the top of which consists of open wooden bars or crossed wire work which allows much of the dust and other loose refuse, besides some of any double cut staple (which should be avoided) to fall through. (2) The separation of the inferior parts of the fleece should then be effected—that is, the poll-locks, bellies, skirts, dung and shanks should be taken off, and beyond this, if from any cause, as sometimes happens, some of the staple should be stained or show any excessive prevalence of burr, it should likewise be removed. (3) These separated portions must in all cases and under all circumstances be baled apart from the fleeces, but the extent to which they may be usefully classified depends in some measure upon the size of the clips and the amount of material to be handled.

Where the flock is of some importance, it may be advantageously divided in (a) fleece, (b) skirts—these being the larger and better parts of the fleece skirtings; (c) bellies; (d) locks, consisting of the heaviest and more wasty fragments of the fleece. Even on some very large sheep stations in the colonies a clip is done up in a more elaborate way, but for general purposes an adoption of even the beforementioned, elementary principles is all that is needed at the hands of the average sheep farmer. Where a sufficient bulk of wool is dealt with, the bellies and locks may to advantage be scoured or hand-washed, as they carry a large percentage of waste in addition to real grease, upon which freight and other expenses in relation to the residuum of wool are very heavy. (4) The classing of the fleeces should then follow. If there be enough hogget, ewe and wether staple to form under each head even a few bales, these should be packed separately, and "lambs" wool always. In classing fleeces before baling, the classer should keep an "open eye" on (a) quality; (b) length; (c) soundness; (d) and condition. The fleeces should after skirting, etc., be folded, not tied, even if this should (as

it need not necessarily) entail the employment of an extra hand to carry the folded fleeces from the table to their respective bins or bales. The folding should be done as follows: The fleece spread out (outside upwards) should be turned from the edges inside outwards on either side to the center, and then folded again (much in the same manner as you would fold an ordinary tablecloth); it should then be rolled up, care being taken to keep a shred of staple at the end free, which, after being twisted, should be tucked under the fold so as to serve as the means of attaching and securing the whole. Tying is objectionable for many reasons, and by following out these simple instructions, the recent complaint from the Bradford Chamber of Commerce about the tying of the fleeces with sisal twine will be remedied.

As extra marketing "pointers" I would say: Avoid branding your sheep with tar; use lamp-black and oil. Let the bales be neatly pressed. Don't spade pack it. The get up is half the selling of it. Skirt carefully and well. Don't put two qualities of wool in one bale, this is bad policy. Select an agent who you can depend on and don't hamper your wool with heavy reserves. It only prejudices the sale and detracts from the true market value of your clip.

AGRICOLA.

STOCK NOTES.

The Texas Cattle Raisers' Palace Car Company has been organized to build \$300,000 worth of cattle cars for their own use, as the packers do. It will be a great saving in the expense of freight. Many of the cattle breeders are subscribing from \$5,000 to \$25,000 of the stock.

Director Sage, of the Iowa weather bureau, has been collecting statistics regarding the losses occasioned in that State by hog cholera. He announces that the loss to the State is a little over \$22,000,000. This is for a single year, and shows the absolute necessity for the adoption of measures looking to the prevention of the disease.

Our Paris correspondent says that in France the tuberculin reaction for stock has become obligatory. That injection must be employed for all cattle entering Paris, and periodically for milch cows. This saves under tuberculosis, next to unknown in France. It is not by milk the disease is accepted as communicated, but by diseased meat. Happily the inspection of the latter is Draconian.

All sheep purchased for shipment at the Chicago stock yards are required by law to be dipped before leaving the yards. Some feeders are opposed to this, but had the law been in operation for the past five years a number of Michigan feeders would be better off to-day than they are. The law is a good one, the only thing to be sure of is that it is enforced, and that the dip used be non-poisonous and effective. Such dips are to be had, and should be given precedence over the crude mixtures which have made dipping a terror to flock-owners.

According to the latest statistics, New South Wales exports more wool every year than is produced in the United States, and while we pasture 35,000,000 sheep, that little colony, until the recent reverses to the industry, had 56,000,000 sheep. We should have 100,000,000 in the United States.

According to Pacific Coast reports there is a great scarcity of cattle in the Northwestern country, covering Oregon, Washington, Idaho and the tributary States, and that demands are being made on Southern California by the Oregon and Washington slaughterers for their supplies, and shipments are being made. The great rush to the Alaskan gold fields will make the shortage still greater.

Consul Bell, at Sydney, N. S. W., reports to the State Department that the long drought in Australia will probably be much worse on sheep than that of 1895, when more than 9,000,000 were lost through that cause alone. Some estimates predict the loss of half the sheep and conservative estimates place the loss at 25,000,000. The lack of rain has destroyed all the vegetables on the ranges, and sheep are being slaughtered in vast numbers to save the pelts. All this season's lambs are dead in most districts. It is declared that one-fifth of the finest wool sheep on the entire globe have perished, and it appears to be the American opportunity now to raise sheep at home, as the prices on the foreign wool market are likely to advance.

The Horse.

THE BLUE RIBBON MEETING.

The annual meeting of the Detroit Driving Club closed on Saturday last. The four or five last days were interfered with by showers and threatening storms, and the attendance was not what was expected.

The contests, with few exceptions, were excellent, and the management of the meeting left nothing to be desired. There will not be a meeting this year, taken as a whole, in which better contests will be seen, or cleaner management prevail, than the one just closed in Detroit. It was in every way worthy of the patronage of those who take an interest in the improvement and development of the light harness horse. That it was not better patronized may be put down to two causes: first, the very uncertain weather which prevailed during the last week; and, second, the continuous racing which has prevailed on the Canadian side of the Detroit River, which has practically become a mere gambling resort of the worst character. This use of the horse as a mere tool for gambling threatens disaster to legitimate racing contests both in this State and the Canadian provinces. Such conditions have led the legislatures in New York, Illinois, and other States, to enact laws which, designed to protect their citizens from the bad influences which such methods always exert upon the young and inexperienced, put an end to speed contests entirely, and thus inflicted great injury upon the horse breeding interest. It looks to us as if the Michigan legislature, at its next session, would be appealed to, in view of existing conditions, to pass laws for the suppression of racing contests throughout the State. And it will serve the gambling fraternity right, although it would be a disaster to our horse breeding interests. Good horses are a fine thing—much to be desired; but good citizens are much more desirable. The presence of such a lot of cheap gamblers and criminals as the Windsor race meeting has attracted to this city, is a menace to the morals of the city, and has proved a fruitful source of crime. Detroit can take care of her own criminals, but when they come from all other States and Canada, and make this city a rendezvous, it is time to put a stop to the attraction which draws them here. It is evident legitimate racing, having for its main object the improvement of the horse stock of the country, cannot exist in competition with these gambling establishments, and if we cannot get rid of one without the other, then suppress both. Several business men of this city have been ruined the past season through the influence of the Windsor race track, and several respectable young men have become criminals from the same influence. It is time to call a halt.

HORSE GOSSIP.

Buffalo is to have a new race track. It is capitalized at \$200,000, and will be located in South Buffalo, near Nantasket Beach.

A California journal says horses suitable for cavalry purposes are now selling there at \$150 per head. A year ago they were selling at \$95.

The following horses have been exported to Vienna, all by Chimes: Charming Chimes, 2:17 1-4; Fanny Bugs, 2:17 1-2 at two years old; Three Bells, and Sitka Chimes. The last two have no records.

Mrs. Lily Langtry, who races in England under the name of Mr. Jersey, won the Liverpool Cup of 1,000 sovereigns (\$5,000), with her horse Brayhead last week. The race had six starters, distance a mile and three furlongs. Brayhead won from start to finish. He was at 10 to 1 in the betting before the start.

Palo Alto, 2:08 3-4, now has seven 2:20 trotters to his credit, of which two took their records as two-year-olds, four as three-year-olds, and one as a five-year-old; and all in races but the two-year-old Avena, 2:19 1-2. This is a pretty good record for a half thoroughbred stallion which was only in the stud a few years.

The race between Star Pointer, Joe Patchen and Frank Agan, at Wash-

ington Park, Chicago, on Saturday of last week, was won by Star Pointer in straight heats, with Joe Patchen a good second, and Frank Agan distanced. The time was 2:03, 2:03 3-4, 2:04 1-4. The outcome was generally expected. It looks as if Star Pointer was to be the champion this season.

The early and continuous racing of colts is giving us a very heavy crop of cripples. There is hardly a four-year-old on the track that is perfectly sound. They either have a "leg" or a bad foot, or some internal trouble, generally of the heart, and drop dead when being pushed hard. Such animals, if they live to go into the breeding stud, can never have sound progeny. Two-year-old racing should be done away with. The great two-year-olds are the has-beens of the next season.

Mr. Dobell's five-year-old bay gelding Dolabra by Emperor of Norfolk, out of Dolinka, formerly the property of P. Lorillard, achieved a remarkable performance at the Liverpool July meeting, tying with Mald of Valletta for first place in the race for the Windemere All-Aged Plate and winning the Seaforth Welter Handicap, all within an hour and a half. Dolabra was regarded as a promising colt before he was taken to England, but did not show much until after he had been sold. It is quite certain that it requires from a year to a year and a half to acclimatize a horse before he can race successfully. It is so with English horses brought here.

Veterinary Department.

CONDUCTED BY DR. W. C. FAIR.

Advice through this department is free to our subscribers. Each communication should state history and symptoms of the case fully; also name and address of the writer. The initials will only be given. When an answer is requested by mail it becomes private practice, and a fee of one dollar must accompany the letter.

Injured Udder.—Cow has been giving bloody milk from one teat for four or five days and is going dry in it. I do not think she has injured her udder in any way. J. M., Omro, Wis.—Foment udder with hot water two hours a day, one hour at morning and one at night. Apply tincture arnica, witch-hazel, one pint each to one quart cold water, to udder three times a day. Also use a milking tube. It is possible that your cow has injured her udder. Try to ascertain the cause, if possible, and remove it. That will assist you in curing her.

Splint.—I have a seven-year-old horse that walks sound and trots very lame. I have been unable to locate his lameness. Lately I noticed a very small swelling on the inside of foreleg just below the knee. He stands up squarely on his forelegs. Does not rest limb at all. I think he goes less lame on soft ground. W. G., Kalamazoo, Mich.—I think your horse is lame from splints. Apply one part red iodide of mercury to eight parts of lard once every three days until he gets well. Light work or slow driving on the road will not hurt him.

Spasmodic Colic.—I have a horse that is subject to spasmodic colic. He does not bloat but rolls and tumbles violently when he is sick. He has always recovered in a few hours, but I am afraid I shall lose him sometime. E. M., Coldwater, Mich.—Give one ounce essence peppermint and one ounce tincture ginger in one pint cold water every hour until he recovers. Give him two drams ground ginger and one-half ounce bicarbonate of soda in his feed twice a day. Also feed him plenty of salt.

Heifer Gives Bloody Milk.—My three-year-old heifer gives bloody milk from right front teat. There is some tenderness and occasionally a little swelling. The milk is all right for awhile, and then it will be clotted with blood. She was fresh about two months ago. A. W., Adrian, Mich.—Your cow has injured her udder by coming in contact with some hard substance. Try to ascertain the exact cause, and by removing it she will soon get well. Apply one ounce acetate of lead in one quart cold water three times a day. Notice that she does not lie down on any rough, hard substance. She should be milked carefully. Avoid bruising sore quarter of udder.

Parasitic Bowel Trouble.—Loss of Power.—Four pigs, seven weeks old, weaned three weeks ago, have been fed sour milk and middlings with a few

soaked peas. Had scours for a couple of days last week. On Saturday I noticed one of the pigs suddenly drop on its knees. It got up in a moment and appeared all right. This dropping down occurred every few minutes. The spine is bent down back of the shoulders. The three male pigs are so affected. Do not appear to suffer or look sick; have not lost their appetite. Local experts are at a loss to diagnose the case. P. C. G., Tawas City.—I think your pigs suffer from a partial loss of power, the result of indigestion and bowel parasites. Give each pig one-half dram powdered sulphate of iron, one-half dram ground nux vomica, one-half dram powdered nitrate of potash twice a day in their feed. After giving the above medicine for one week, discontinue it and give one-half dram ground gentian, one-half dram ground ginger to each pig twice a day for a few days. It might be well for you to change their feed.

Laminitis.—Six-year-old horse began to act dumpy about a week ago. His hind ankles swelled. I went to a veterinarian. He gave me some powders. Next day the horse got stiff in hind legs. I called the veterinarian. He said the horse had bilious fever. His temperature was 105 degrees. He had been used to drinking brook water. The doctor ordered me to give him cold well water. Now he is stiff all over and can scarcely move. The doctor said he was floundered. His appetite was a little better to-day. Give me your opinion as to what the disease is. What caused it, and do you think he will get well and get over his stiffness? I was afraid that the cold well water was not good for him, as he was used to drinking warm brook water. C. G., Plymouth.—I do not think that the cold well water injured your horse at all. When an animal has a high temperature nothing acts better than cold water. He should be allowed to have plenty of it, given in small quantities and at frequent intervals. Give him 15 drops tincture of aconite and one dram powdered nitrate of potash every three hours until his temperature subsides. Stand him in wet clay. Have his fore shoes removed. Feed him no grain. By making him exercise a little by walking, he will improve. I think by giving him good care he will get entirely well.

Regatta at Ottawa Beach.

On August 5, 6 and 7, the Grand Rapids Yacht Club and the Mississippi Valley Amateur Rowing Association will hold a regatta at Ottawa Beach, the popular summer resort.

The entries include rowing clubs from Chicago, Detroit, Milwaukee, and other places, besides the Yacht Club, and a fine program of races of various kinds has been prepared.

The hotel accommodations at the Beach and other resorts on Macatawa Bay—on which the regatta will be held—are better this season than ever, and a large number of people are expected to witness the sport.

Ottawa Beach is reached by the C. & W. M. Railway, with four daily trains from Grand Rapids and connections from other parts of the line. All roads lead to Grand Rapids, and visitors from all parts of the State can secure reduced rates upon application to local agents.—Geo. DEHAVEN, G. P. A., C. & W. M. and D. G. R. & W. R. R.

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Farmers' Clubs.

CONDUCTED BY A. C. BIRD.

All correspondence for this department should be addressed to A. C. Bird, Highland, Mich.

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All communications relating to the organization of new Clubs should be addressed to F. D. Wells, Rochester, Mich.

LOCAL CLUB WORK.

In visiting many of the Farmers' Clubs of the State during the past two years we have taken advantage of the opportunities afforded to study the different phases of club work. In general it may be stated that each club has some distinctly meritorious feature. It may be the manner of conducting the exercises, the place of meeting, the management of the refreshments, the method of conducting the discussions, the length and frequency of the meetings, or the planning of the literary work. A study of these varying methods is not only interesting, but it is most truly instructive, and the idea suggests itself, would it not be a source of profit to the clubs of the State generally to have a symposium of articles on this very subject? In other words, would not the interchange of ideas which would be secured by having these various methods outlined in this department of The Michigan Farmer be a source of enduring benefit to every local club in the State?

We are certain that all will agree with us on the advisability of such a course, for there is no club so old or with a system so perfect that new ideas are not occasionally needed to give zest to the work.

In accordance with our belief in the merit of this idea, we invite the several corresponding secretaries of the State to contribute short articles from time to time, descriptive of the general methods employed in their respective clubs. These articles must of necessity be brief, but let nothing be omitted that is of general interest to the club-workers of the State. During the next two months club reports will be few in number, since the greater number of the clubs hold no July or August meetings, and no better time can be selected for this work than the present. We hope to hear from a goodly number of clubs on this point during the succeeding few weeks.

FARM IMPEDIMENTS.

(Paper by A. A. Hall, read at the Stockbridge Farmers' Club, and published by request.)

"Farming does not pay," is a proposition requiring no great amount of demonstration to verify. And for the past semi-decade of years we have been living under similar conditions. These conditions ought not to exist. For no business can live except there be remuneration. Except there be some return for the energy expended in its prosecution. A business may continue for a time under a constant loss, but sooner or later it must collapse; and the length of time it endures depends upon circumstances. These circumstances at the present time seem to be against farming, and place it among the unprofitable vocations. And if these do not change ere long the calling must succumb to the inevitable, and the farmer look elsewhere for a livelihood.

But we cannot do without the farmer. At least the products of the soil, brought forth through the exertion of the farmer, are indispensable. And, if from no other source, we can from this count a consoling thought.

A proper adjustment of the controlling influences should be such as to render each and every necessary vocation in a country profitable. That is, there should be such an adjustment of affairs that each vocation, when properly and economically pursued, would give returns above necessary expenses. The day laborer, the mechanic, the merchant, the artist, the doctor, the teacher, the preacher, and the farmer, yes, men and women, too, of all proper vocations, should be so compensated for their labor as to be able to lay aside a little for the "rainy day," for the necessary demands when manhood's vigor has been exhausted. If such is not the case then something is wrong.

Of course we must not, neither would

we, condemn the controlling influences as conditions, simply because certain ones fail; but when a class generally are unable to meet expenses we are compelled to conclude that the conditions are not properly adjusted. Upon every side we see the farmer either standing still or failing, and by far the larger portion seem to be in the latter condition. Hence, there need be no further proof that the vocation is, at present, weighed down with barnacles, by which its very vitals are being sapped.

We fully realize the condition, and eagerly look about to discover the cause, or course, by which we have so unmistakably arrived at this perilous dilemma, and to seek that way by which we can most expeditiously extricate ourselves. In the consideration of this matter let us strive to be fair. Let us not too severely criticize those whose vocations we are not conversant with. "Distance lends enchantment," and it is human nature to think the other fellow has a better job than we. Anticipation in our case might be far better than participation. Possibly were we to see the workings, the requirements, the conditions, and the recompense of the other fellows, we might hail with pleasure our return to the farm, even with conditions as they are. Conditions as they ought to be make farming one of the most natural and agreeable callings extant.

And why are conditions not as they ought to be? Is our national government to blame? Is our State government to blame? Are the natural elements against us? Or are we ourselves responsible for our own condition?

Possibly each of the above is, in a measure, guilty for the unprosperous state of the farmer. But is there not a natural underlying current that has slowly but surely drifted us on into the maelstrom, and for which we can blame nobody in particular? Let us consider:

Our forefathers came here years ago, into the forest, empty-handed, nevertheless, they prospered, though slowly, and the reason is quite evident. The house that sheltered them from the storm, excepting an author of a few shillings for nails and glass, was all made by the fathers out of the material which nature furnished free. No costly carpets were upon the floors, no forty-dollar bedroom suites were in the house. Their tables did not have carved legs. They did not cook their food upon a forty-dollar range. Their table was not spread with expensive silverware. No upholstered furniture then was needed or bought. No money was then paid out for an organ or piano.

Then, mother made all the clothes, thus saving many dollars annually, and father tapped, and in many cases made, the shoes and boots—which our happy recollections tell us—were somewhat hard but enduring. Then father split from the ash tree the long slender strips with which he bottomed all the chairs, and mother, without a cent's expense, made all the soap. Father did not then pay out from five to fifteen dollars for daily and other papers, nor did he leave fifty cents a month at the barber shop. Then no professional dressmaker drew from the reserve fund, nor did the change of fashion make it necessary every new moon to lay out a burdensome amount for new paraphernalia for either sex. Then nothing was paid out for the hundred and one little things, such as cocoa, chocolate, dried citron, prepared mince meat, prepared mustard, canned fruits, safety-pins, carpet sweepers, etc., etc., which now consumes all the pin money and makes a large hole into the other funds. Then on the farm there was not, besides an ordinary wagon, a pair of trucks, a light platform wagon, an open buggy, and a covered buggy for extra occasions.

Then two hundred dollars was not drawn from the surplus fund for a binder, eighty dollars for a mower, fifty dollars for a drill, twenty-five dollars for a rake, fifty dollars for a hay fork or sling, one hundred dollars for a windmill, etc., etc., all of which costs more now than it cost then to run the whole farm a year. Then the farm was new, the soil rich and produced bountifully. But as the demands for these new things came, the greater were the draughts upon the soil, which have continued to be greater and greater until today it is too weak to stand alone; yet we are demanding more from it than ever before.

There was a time when we received good prices for wheat we produced, and at the same time the yield was generous. Times have changed. On account of the lucrativeness of farming then there was a rush into the calling.

Prices of produce went down. The yield became less. But that price upon the land did not diminish. The mortgage remained the same. Hence the present conditions.

Now what is the alternative for the farmer? It is quite evident that some change is absolutely essential, else utter failure stares the farmer in the face. Either such an adjustment of the controlling influences must be made as will bring to the farm larger returns for smaller yields, or expenses upon every hand must be curtailed.

The writer would suggest the possibility of such an organization as would enable the farmer to sell his products in better markets, or to do away with the middlemen who handle the farmers' products and take the meat of the proceeds and allow the farmer only the shucks. Or such an organization as would enable them to make their existence felt in our legislative halls.

The constantly increasing national, State and county expense is a sure menace to the farmer, since the butt of the burden falls on him every time. And the reason for it is quite evident, because the farmer's voice is not heard where it has any effect against it. Farmers must combine in a harmonious effort to change existing conditions. And when the day comes in which we shall be able to stand firm in an effectual and harmonious union, all others will stand in awe. For it is from the farm that they receive their bread and butter. It is from the farm they receive the bone and sinew that protects them from invasion and rebellion. It is from the farm they receive their Lincolns and Garfields. It is from the farm that they receive their very best scholars, and statesmen, such as Webster and Clay.

The farm is the incubator of many of the world's best things, therefore, dear friends, let us take courage, for, "Though on homely fare we dine,

Wear hoddin'-grey, and a' that;
Gie folks their silks, and knaves their wine,

A man's a man for a' that.
For a' that and a' that,
Their tinsel show, and a' that;
The honest man, though e'er sae poor,
Is king o' men for a' that."

REPORTS FROM LOCAL CLUBS.

FULTON CENTER FARMERS' CLUB.

The July meeting of this club was held at the home of our president, Mr. Sidney Sessions. Although a busy time, sixteen members and three visitors were present.

After the opening exercises, we were entertained by a paper written by Wm. Foster showing the extravagance of some farmers in buying tools, which was well discussed.

The Agricultural College question was well discussed. John Price thought farmers would think better of it if they understood its workings better.

J. Foster thought too few returned to the farm from there.

Mr. Sessions thought the College all right if farming alone were taught there.

The majority thought that if students wanted knowledge of other subjects than farming they should pay for it extra.

After supper and a jolly good time, we adjourned to meet the second Thursday in August with Mr. and Mrs. Charles Dodge.

Since writing this report, Fulton Center friends and Farmers' Club are saddened by the death of Mrs. Charles Dodge.

MRS. ABEL SKINNER, Asst. Reporter.
PROGRESS FARMERS' CLUB.

Although a busy time, a goodly number had planned their work and business so as to attend our club meeting held at Mr. and Mrs. Oren Bradley's, July 7th. After making arrangements for the annual picnic to be held in August, the regular program was taken up.

The first question was, "How shall we through the club dignify labor so the boys will stay on the farm?"

C. M. Pierce. First, educate the boys. He does not know of any better school than the Agricultural College, and thinks good books and papers should be provided to keep the boys thinking.

Ambrose Haines thinks one thing necessary: the boy must think it is necessary for him to make a living.

N. E. York said we must have a liking for the farm and not cry out hard times.

Rev. D. E. Flemming said we must do away with the spirit of complaining and faultfinding.

Second question, "What is the best

breed of cattle for the farmer to raise?"

O. Bradley was in favor of the Short-horn, as were the rest of the company excepting C. M. Pierce, who liked the Red Polled best.

After miscellaneous exercises A. W. Babcock gave a good description of the Agricultural College. He thinks that through the efforts of the Farmers' Clubs and Granges, the legislature gave it all the appropriation asked for.

F. A. BRADLEY, Sec.

OXFORD FARMERS' CLUB.

The last meeting of the Oxford Farmers' Club occurred the 26th of June, at the residence of Edson Taylor of Oakwood.

Mr. Taylor's family have just got nicely settled in their new building, built since the tornado of May 25th, 1896.

Vice-President H. W. Hollister called the meeting to order, and O. F. Delano opened discussion on "The Agricultural Education appeared to have a different effect on different persons. He had seen good results from graduates from the M. A. C., but not all graduates had met his expectations.

He read extracts from Judge Chatterton's address at the commencement exercises at the College which held the view that work and callous hands were unnecessary under present conditions. Also, that the management of the College should be turned over to the alumni, etc. Mr. Delano claimed that work was essential to the development of manhood, and that the rule requiring work of the students at Lansing should be continued. He described a farm school in Pennsylvania, which he thought was ahead of our M. A. C. The students from our College seemed to feel above work. He closed with the statement that educated people were the ones that get the best of everything nowadays.

Mr. Hollister said that as he understood it, the primary object of the College was to help the farmers. It was his belief that it had failed to meet the expectations of the people. He had heard young graduates from the College, giving advice to experienced farmers who knew more about the matter themselves.

Mr. Adams considered the College a good school for farmers' boys and girls to get a practical education, and the bulletins from the Experiment Station were of great value to farmers who cared to follow instructions.

Mr. Cowdin indorsed Mr. Adams' views and urged the importance of the farmers' school at Lansing. He said that every person should be taught to work. He believed the manual labor feature of the College was correct, and that the Experiment Station was worth more to the farmers of Michigan than the cost of the College plant.

Mrs. Cowdin had faith in the College. There was undue extravagance in most of our schools, but that was more the fault of the times than of any particular school. The physical training at the College was good.

Mr. Frink claimed that the College was a benefit to the State at large and he was willing to share in the expense of maintaining it in its strength. He also spoke of the great value of the bulletins.

Mr. Edson Taylor was opposed to the idea of "class" higher education. The idea of a farmers' college was nice in theory, but wrong in practice. Those who attended the M. A. C. did not become farmers. It took them away from the farm.

Mr. Frink also spoke of the short course at the College and had urged different young men to avail themselves of it.

J. G. Noble felt very friendly toward the College. He thought that if people who now opposed it, should pay the institution a visit, they would have different views. He was not acquainted with any person who had visited the College who was opposed to it, except a very limited number of conceited farmers who did not have any conception of the purpose for which it was created. It was no valid objection to the school, because all of its students did not follow farming, for not all those who took special training for the law, medicine and theology followed them through life. He thought the present method of control by a Board appointed by the Governor, was as good as could be found. At least better than control by the alumni scattered as they are all over the United States, as recommended by Judge Chatterton.

It occurs to your reporter that if excursion trains could be run to the College during the month of August it

would give many people an opportunity to visit the College, who otherwise may never see it. A picnic dinner on the campus and a brief inspection of the institution could not fail to make it friends, and add to its roll of students.

Mr. Cowdin read the National Crop Report for June, after which a short discussion on the matter of fashion was indulged in. Our next meeting will be July 31st at M. L. Frink's. We keep up our meetings throughout the year. Our August meeting is usually a picnic by the lake.

We are expecting to have "Children's" Day in September, a little late, perhaps, but our children were born late in the season, especially the "Club baby," Miss Gladys Marie Noble, who was named by the club.

REPORTER.

We have received so many inquiries regarding the manner in which the recommendations of Judge Chatterton, referred to above, were received by the Alumni of the College at their recent meeting that we shall reply to them fully and explicitly in our editorial columns of next week.—Ed.

BLISSFIELD FARMERS' CLUB.

The Blissfield Farmers' Club met July 14, at the home of L. C. Lathrop in the Township of Ogdan. The weather being so unfavorable for harvesting, the house was full. After partaking of a well served dinner prepared by the ladies, President W. H. Colyer called the meeting to order. The usual literary exercises and the question box awakened a goodly amount of enthusiasm.

The question for discussion was "Is there any profit in raising colts with the present outlook?"

L. C. Lathrop took the ground that there was going to be a fair market for desirable horses in the near future. Byron Niles said so many had died during the heated term and from other causes it would create a market.

J. B. Clement thought there was no money in horses, would be more profit in raising steers. Colts were liable to become injured in some way which if not unfitting them for use would detract from their value.

P. L. Austin thought there was no money in colts. They would eat their heads off before maturity.

Mr. Porter knew as a general thing colts picked their living most of the time, therefore would not be much outlay for the first three years.

J. K. Crane said colts could be wintered very cheaply especially where a person was feeding many sheep, as the colts would eat all the clover left by the sheep and it would be clear gain.

W. H. Osborne from the present outlook was in favor of raising colts, as there was getting to be a dearth of horses.

W. H. Colyer thought from present indications there would be a good demand in a short time for a good grade of horses. It was generally considered that the outlook was good and horses were going to be in demand soon.

J. K. CRANE, Reporter.

CLYDE AND GRANT FARMERS' CLUB.

The Clyde and Grant Farmers' Club held the June session at the residence of F. A. Beard Esq., of Clyde. Being Children's Day the amusement and entertainment of our young people occupied the time and all enjoyed it.

On July 3d the Club again assembled at the residence of Mr. and Mrs. Byron Monroe, and was well attended, considering the heat and the fact that it was fine hay weather.

A fine program was rendered including a very interesting paper on "The Power of Influence," by Mrs. B. D. Smith.

Mr. H. Kingsley read a paper on "General Sheridan," noting that the horse made famous by the ride to Winchester was raised by Mr. Sexton, of Lakeport, this county.

Mr. Wm. Hill gave an instructive address on root culture. This was both timely and welcome.

Rev. Mr. Nan Kervis, a fine practical gardener, gave the club some illustrations of implements used by himself in caring for his very fine garden.

A well discussed paper by F. A. Beard, "Things to do and not to do," closed the program.

The viewing committee reported Mr. Monroe's farm in good order, and one of the finest in this part of the county.

The August meeting will be held at the residence of Malcolm Patrick, of Clyde, on the last Wednesday of the month, and the September "Harvest Home" club, devoted to an exhibition of farm produce, at the residence of Henry Kingsley.

MRS. O. McKAY, Cor. Sec.

Miscellaneous.

A PIONEER DRUG STORE.

MR. DAYTON RAN IT ON THE BUFFET LUNCH PLAN WITH UNHAPPY RESULTS.

We had four or five saloons and one grocery at Cedar Hill, when the outfit of a man named Dayton arrived. He had seven pack mules loaded with goods, and after a day or two he unpacked and set up for business and hung out a sign reading, "Dry Goods, Clothing, Hardware, Groceries, Boots and Shoes and Tinware; also Drug Store." The shanty which he occupied for a store was about 14 feet square, and he had everything packed in a heap.

The drug store was an innovation. It was not only the first to be established at Cedar Hill, but the only one for two hundred miles around, and we were inclined to look upon the druggist with awe and respect. We were a very healthy lot up there, and, aside from accident, no man had lost a day for six months. No sooner was that drug store opened for business, however, than most of us felt a yearning. Hiram Davis hit the nail on the head, when he said to the crowd: "Boys, that drug store reminds me of home and of the old woman and children. Jest think of pills and salts and calomel and quinine! Civilization has come knockin' at our doors, and it's our solemn duty to feel bad and buy sunthin'."

Plenty of us began to "feel bad," but when we came to buying something we found that the druggist was doing business on a line of his own. When Abe Smallman dropped in to get a dose of calomel for his liver, which was doing business seven days in the week and in need of no encouragement of any sort, Mr. Dayton said to him:

"I bought this drug store outfit of a tenderfoot down at Grass Valley. He was sick and discouraged and wanted to go back home. I don't know much about the business myself. I'll hunt up the calomel and sell it to you, but I won't be responsible for the results."

"What d'ye mean by results?" queried Abe.

"Wall, I've got calomel, arsenic, salts and a lot of other things all mixed up here, and I'm not going to guarantee anything. Mebbe it'll be calomel and mebbe not."

We all shied off for a day or two at that, but when we came to think it over we rather liked the uncertainty, and the druggist was kept busy with our purchases. Some of his liquids and powders were in bottles or papers, duly labelled, and some of the powders were in parcels without a label on them. If anybody asked for Epsom salts, for instance, the druggist would fish around under the heap of boots and shoes and clothing till he got hold of a box or parcel, and, bringing it out, he would say:

"All I know about this stuff is that it ain't copperas. I took a parcel of copperas on a debt once, and so I know the stuff when I see it. If you want to run chances you can take it along."

Most everybody was willing to run chances, and for two weeks all went well. If nobody was made any better, nobody was made any worse, and the druggist did a rushing trade. Then came an afternoon on which old Joe Crosby laid down his working tools and announced that he was "off his feed" and had got to have something to ward off a bilious attack.

"I can't say what's good for it," said the druggist, "but I'll fish up a lot of packages and you can take your choice."

He laid out ten parcels on the counter, and old Joe wet the tip of his finger and tasted the contents of each in succession. He finally found one to suit his palate, at least, and he bought a dollar's worth and went off to his shanty to dose. Half an hour later he was taken with violent cramps, and inside of two hours he was dead. A move was made on the druggist, but the smiling and urbane Mr. Dayton replied:

"Gentlemen, it might have been powdered borax, or it might have been arsenic. I can't tell the difference between the two, and I have been free to say so. I gave him good weight and he took his chances."

Our purchases were light for the next week, but in time we got over the scare and went to buying again. A fortnight after the death of Crosby a man named Healy was made terribly sick for two or three days by a dose of

some unknown stuff, and the next day Sile Warner entered the drug store to say:

"I ain't feelin' jest as I orter, and I want sunthin' to brace me up. Kin ye recommend a bracer?"

"I never recommend," was the reply. "Here's the bottles and here's the packages. They may brace or they may lay you out."

"Wall, this is a world of chance," continued Sile as he pawed the stuff over, "and I'll take a dollar's worth of this stuff in the bottle. It'll wet the throat when it goes down, anyway."

The stuff was probably laudanum, for Sile never woke up from that night's sleep. His chum went over to give the druggist fits about the matter, but Mr. Dayton headed him off with:

"Dead, eh? Sorry to hear it, but he took his chances. I will now label that bottle 'Poison,' and should any of you wish to commit suicide you will know what to ask for."

We tried to brace up after the second calamity, and were gradually getting our confidence back, when a man named Grimshaw got something for chills. The druggist wouldn't recommend it, as usual, but it had been marked by the tenderfoot as "Good for Chills." It proved to be. One dose removed Mr. Grimshaw from this chilly world, and over his grave we held a public meeting, and—

"Whereas, It bein' only a question of time when our drug store will kill off every man in Cedar Hill; and

"Whereas, We owe a dooty to ourselves and them as has gone; now therefore

"Resolved, That one or the tother of us has got to git."

The "tother" was the drug store. After a general consultation, we made up a shake purse of \$50 to buy all the drugs left on hand, and after everybody had given himself one last dose of whatever he fancied, the remainder was thrown into a ravine, and Mr. Dayton turned his attention entirely to other lines.—American Druggist.

HOT WEATHER COMFORT.

SAND BEACH, July 9th, 1897.

MICHIGAN FARMER:

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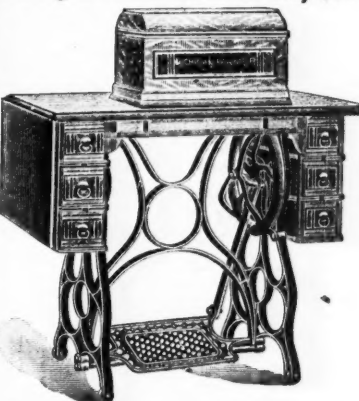
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State Journal of Agriculture.

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DETROIT, SATURDAY JULY 31, 1897.

This paper is entered at the Detroit Postoffice as second class matter.



THE FINEST ROUTE ON THE
CONTINENT.

That is the one selected for The Michigan Farmer Excursion, and we will have the beautiful steamship City of Mackinac on which to sail over it. To those who have never had the pleasure of making the trip from Detroit to Mackinaw Island and return, we can promise them a most pleasant sail, with beautiful scenery, and an opportunity of seeing many points of great historical interest.

In a number of letters reaching us regarding the excursion, parties have asked what the cost of remaining on the Island one day would be. We understand the cost will be from \$2.50 upwards, according to the accommodations required.

In answer to another query, we say that the only way to be sure of a berth is to secure it in advance, and those who contemplate going should write in at once and have them selected and booked. Of course there are some berths more desirably located than others, and first applicants will have their choice.

Time was when Michigan was largely interested in the price of hops, and the report of their steady advance in price would have meant much to our farmers. But we doubt if there is a hop yard left in the State, and perhaps it is just as well, as they are the most uncertain of all crops to raise so far as their value is concerned. They have made fortunes for some, and they have ruined thousands. Just now the telegraph says prices are advancing on the Pacific slope, which has become the center of this industry, as New York and Michigan was fifteen years ago. But even at the advance, prices would not be regarded as more than paying a small profit to the grower. Eleven cents is the highest price yet paid, but that is much better than seven cents, the highest quotation for the growing crop six weeks ago. The crop is said to promise a good yield, and of excellent quality, and eastern parties are on the ground contracting for all they can get at ten cents, while growers demand eleven, and may get twelve.

THE FUTURE AND ITS PROSPECTS.

With the enactment of the new tariff law, and the adjournment of Congress, the people of the United States are placed under new conditions, and what the results will be is an important and interesting question. The feeling is certainly one of hopefulness and confidence on the part of the business interests of the country, just the opposite of the feeling among them when the Wilson bill became a law. Then everyone was taking in sail and preparing for a financial storm, and by their efforts to secure themselves from disaster did much to precipitate the crisis they were anxiously preparing to meet. Now the feeling is one of confidence in the future, a belief that the new conditions will be favorable for the expansion of industrial interests and the investment of capital. This general belief will do much to bring about the very conditions hoped for, as confidence begets confidence, and the success of one enterprise leads to the inception of others.

As to the tariff law just enacted, we can truly say that, from the standpoint of the agriculturist, it is the best one ever passed by any Congress. We say this unreservedly and after full consideration of the agricultural schedules. The wool schedule is not all we wanted, but it comes nearer meeting the views of those best informed regarding the condition of the industry at home and abroad than any one ever before enacted. Then there has been a duty of 15 per cent placed upon hides, a direct concession to the demands of the farmers and cattle-raisers, and in opposition to the manufacturers of leather who made a hard fight to have hides placed on the free list. Duties on live stock have been increased, and made specific instead of ad valorem, as in the Wilson bill. All farm products have also been protected by increased duties of a specific character. The schedule which has been subjected to the most criticism is that on foreign sugars. It is claimed that these increased duties are entirely for the benefit of the sugar trust. But they are intended, and will probably result in, the extension of beet sugar production in the United States. It is properly regarded by the well-informed that the production of the enormous amount of sugar consumed in this country, estimated at 4,000,000,000 pounds, and for which \$100,000,000 is annually sent abroad either in products or gold, would be a great advantage to this country, and afford a profitable direction in which to extend our agriculture without adding to those crops of which there is already a surplus. Any tariff which will do this will certainly prove of immense advantage, not only to the farming community but to the whole country. Sugar can, and will, be cheapened by home competition, while the immense sums heretofore sent abroad for that article will be retained at home and added to our permanent capital. We, therefore, feel satisfied that much of the criticism of the sugar schedule will prove as groundless as that on the tin-plate schedule of the McKinley bill, which resulted in giving us a great national industry, while lowering the value of the article to the consumer. We expect to see Michigan do a good deal in the beet sugar business under the provisions of the new tariff.

The other schedules of the bill are regarded as satisfactory to the various productive interests of the country, and manufacturers are preparing to meet the new demands which will surely arise for their wares now that the immense importations of foreign goods will be largely reduced. This

means more employment for labor, and freer expenditures for staples by the laboring classes as the result of their improved condition. For four years they have seen their earnings steadily diminish, and this has been reflected in the lessened consumption of articles of food and clothing, which has greatly injured producers of these staples.

Looking over the whole question of the future prospects of the country, we must say they are very encouraging. For the next four years we shall have a period of great industrial activity and advancement. New enterprises will be inaugurated and old ones extended. The busy hum of machinery will be heard in many factories and shops which have been silent for years; and the tall chimneys will again be sending forth their volumes of smoke as evidence that activity and enterprise have taken the place of silence, gloom and depression. The country never was in better shape to start on a period of progress and development. The hard times have done some good. Habits of economy and thrift have been developed, as shown by the immense amount of debts which have been paid off in the various States. The harvest now in progress shows crops to be excellent, while the demand for them abroad is likely to be large, owing to other nations not faring as well as usual. We look for good prices for all agricultural products as the result of an improved demand from abroad as well as from home consumers. In fact, to sum up, the future is brighter and more promising than for the past five years, and we fully believe no one class will be more generally benefited than the farming community—the source from which all permanent prosperity must come.

STRIKE OF THE COAL MINERS.

The strike of the coal miners for an increase in wages and the reform of certain abuses which they claim exist under the present methods of the mine operators, although taking place at an unfortunate time for the business interests of the country, seems to be justified by the condition of the miners and their families. The wages they have been receiving for the past two or three years, coupled with the fact that they have only had employment a part of the time, owing to the lessened demand for coal as the result of the closing down of factories and other unsatisfactory conditions, made the position of the miners one of great hardship. It is, therefore, quite natural that the sympathies of most people are with the miners in their struggle for better treatment and higher wages. Of course, the operators may have some reason for refusing the demands of the men, but it cannot be because they believe the wretched wages now received by the miners are at all adequate to their necessities, or justified by the prices of coal at the time the strike was inaugurated. We believe the feeling among operators is largely one of sentiment. They resent the idea that their employees should demand increased wages, believing that one demand will be followed by another if granted without a struggle. Then there is a great deal of friction being stirred up between the two parties to the struggle by the presence of a number of "labor agitators," who flock to a strike like buzzards to a dead carcass. They are the source from which deeds of violence come during strikes. They inflame the minds of the strikers with harangues, counsel personal violence to those not in sympathy with them, and do all they can to keep the two parties who are most vitally interested in antagonism to each other. If they were entirely removed from the scene of the strike, and those most deeply interested allowed to come together and

settle their own affairs, we feel confident that the struggle would end within a week, and the men gain all they will after a much longer fight, and at the expense of much suffering and hardship.

But sentiment should not prevent the mine operators doing justice to their employees. The wages they are paid are pitifully small, and should be increased at once. It is the condition of the lowest class of labor which determines that of the country. It is an absolute necessity to the prosperity of the country, as a whole, that the earnings of labor shall be large enough to allow the laborer and his family to live in a respectable and comfortable manner. Their condition is reflected in every line of business and production, whether of the workshop, the farm, or the factory. This one great fact should have a strong influence in determining the course of employers of unskilled labor. The prosperity of the laborer means the prosperity of those who live upon the results of his labor or his expenditures. Then in the general interests of the country at large this struggle should be ended at once, and in a manner that is fair and equitable to the class which has suffered long and borne patiently under the hardships to which it has been subjected.

The statement of the condition of the United States Treasury on Friday of last week, at the close of business, showed the available cash to be \$235,791,748, and the gold reserve \$143,476,580.

It has been decided to establish a military post in Alaska near the gold fields, for the protection of American citizens and keeping order among the gold seekers. From the rush to the Klondyke region, which will include all classes and conditions of men, and from all countries, it is safe to say the post will not be established before it is needed.

Bradstreet's trade circular of last week, referring to the wheat crop, said: "The world's wheat crop outlook continues to favor the United States much as it did eighteen years ago. The outlook is that Russia, alone of all other wheat exporters, will be able to compete with the United States. The advance of more than 20 cents a bushel, compared with a year ago, in the face of a domestic wheat crop, probably 100,000,000 bushels larger than last year, and the prospect for a continued higher level for quotations, owing to increased demand from importing countries, explain why the American farmer is to secure his proportion of the advance. That he is alive to the situation is indicated by a tendency to hold back wheat already harvested, notwithstanding higher quotations."

The Detroit College of Medicine, which has achieved a high standing in the profession for its very complete course of instruction and the character of its faculty, has added to its other departments that of veterinary science. A new building has been erected especially for this department, and Dr. E. A. Grange, so well known from his long connection with the State Agricultural College, placed over it as principal and professor in charge. Dr. Grange has created the veterinary department at the Agricultural College, having taken charge of it when started, and remained there ever since. He has also served as state veterinarian for some dozen years, and has had a wide and valuable experience in that connection. A better selection could not have been made than that of Dr. Grange, and we predict this department of the college will be a great success.

Three of a Kind via Michigan Central. Niagara Falls, Thousand Islands and the Sea Shore can all be reached on the low rate Michigan Central excursions Aug. 5th to Niagara Falls, Alexandria Bay and Portland, Me. See agents for full particulars.

A FRUIT GROWER TALKS ABOUT THE COMMISSION BUSINESS.

To the Editor of The Michigan Farmer:

I noticed in to-day's Farmer an experience of a fruit grower with a commission firm in Detroit, and would like to offer a word on the other side. There is no doubt that there are many thieves and swindlers in the commission business. I know that is so from personal experience. On the other hand, there are many firms that are as honest and reliable as the banks, and if growers who ship would take the trouble to look up the standings of the various firms they would not be entirely in the dark.

It is more than likely that, when the agent told Mr. Yauney that strawberries were selling for \$1.00 to \$1.25 per sixteen quarts, he told the truth. Market reports on perishable goods are unreliable. I have sold strawberries in the morning for \$2.25 per bushel and before noon have seen them selling for 50 cents per quart. Peddlers have cried strawberries on the streets of Detroit, this season, three quarts for 10c, and they were selling at a profit, but not to the grower.

Sometimes the help of the grower is responsible for the loss of the consignment. Good fruit on top; culls nicely secreted. (Of course the honest farmer would not do that.) An example or so out of many will show that the growers' help is not entirely verdant concerning the tricks of the trade. I have known of eight empty baskets being placed in the bottom of a thirty-two-quart crate. Two years ago I received a car of peaches from Grand Rapids which looked well and was sold in good faith. I refunded the purchase money on about 40 per cent of the load, as windfalls and withered fruit had been nicely faced with good fruit. The shipper should not have received one cent for that lot. Of course the help put it up in the absence of the grower.

Good fruit often has to be sold low or go in the garbage. When Woodbridge street is piled full and both city markets glutted, prices that will attract the peddlers must rule. The commission houses may do their best and yet not get freight out of the goods.

I hold nurserymen responsible for much of our trouble in that they have taken advantage of the agricultural depression and by much fiction have induced people to plant ten times as much fruit as there is any demand for.

The law of supply and demand must prevail. A commission man is no more able to hold up the market when buried under an avalanche of fruit, than were the dealers able to obtain remunerative prices for the potato crop of last year.

Usually it is best to sell the surplus to a local shipper, as he is posted concerning the ins and outs of the commission business and knows the best markets. When he dares not buy and ship, what may the grower, who sends his goods to unknown men in a glutted market, expect?

C. E. HADSELL.

THE AGRICULTURAL COLLEGE.

I want to express an opinion as to the advantages of an education at the Agricultural College. I have found it exceedingly profitable to visit the institution every year, and the more I see of it and study its workings the more I see in it an ideal institution; and the demand for its graduates in the higher workings of the factory and farm furnish abundant evidence of its value to the whole world. The idea that it benefits only its graduates is an error; they go out into every community, where they take root and grow. Agriculture has forged to the front in improved methods, keeping fully abreast with any other calling, and an investigation of the origin of these improvements will show they emanated largely in the Agricultural College.

As an example, we cite fungi and insects which devastate the orchard and berry field, now so easily controlled by spraying. It was the Agricultural College which reduced the whole matter to a definite formula and system to produce best results with least expense and labor. We have not destroyed all the insect pests, but when new things have appeared all eyes turn to the experts at the College for relief, and have not always looked in vain.

We have an abundance of educated men, but they are not practical; they are mere book worms, crammed with theories without the practice or ability to use them. Agricultural College stu-

dents learn the work by doing it; they learn to do it in the best way. Employers understand this; hence they have the preference in all practical avenues of life.

My advice, then, is, if a person wants an education for purely literary ornamentation an ordinary college will do, but if it be desired to fit the student for the practical affairs of life; to be real leaders in the arts and sciences, I know of no place equal to this institution, now the pride of the advanced farmers of Michigan.

R. M. KELLOGG.
St. Joseph County, Mich.

Grange Department.

Our Motto:—"The farmer is of more consequence than the farm, and should be first improved."

Address all correspondence for this department to
KENYON L. BUTTERFIELD,
AGRICULTURAL COLLEGE, - - MICH.

News from Michigan Granges is especially solicited.

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Lecturer—Jason Woodman, Paw Paw.
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AUGUST PICNICS.

It is perhaps not too late yet for Granges who have not already done so to arrange for a picnic. Even if you can't have a "big" time, have a small one. The farmers in the northern portion of the State more especially will doubtless wish to attend the Farmers' Day at Bay View, which occurs August 18. The speakers are Hon. J. M. Stahl, of Illinois; Pres. J. L. Snyder, of our Agricultural College, and Sister Mary A. Mayo. Low rates on railroads will probably enable a large crowd of farmers to attend this meeting. An excursion from Battle Creek and intermediate points will visit the Agricultural College August 17; another from Greenville, Ionia and other points along the line will come August 19, and it is hoped that one from Grand Rapids and intervening points will visit the College August 20. Farmers along the routes of these excursions will find this a fine opportunity to visit the College. We want to get brief reports of all the picnics. Correspondents, please report them promptly.

GRANGE NEWS.

Cleon Grange, No. 633, is still in prosperous condition; applications for membership still coming in. We sent for binder twine; it proved to be quite a saving. If farmers knew what was for their best interest they all would join the Grange.

Manistee Co.

C. M. WILSON.

Whitney Grange No. 513 held an interesting meeting on the 16th. Plans

were completed for the annual picnic, to be held August 4. The committee appointed to meet with a like committee from Progress Farmers' Club reported that all plans and arrangements for the picnic had been made, they having engaged Mrs. Mary Mayo and Hon. A. N. Kimball to deliver addresses on the occasion. The Millington brass band will also be present. Prof. Harry Sarnard has also been engaged to give an exhibition in tight rope walking for the amusement of the young people during the noon hour. C. M. Pierce was chosen president of the day and Mark York and Charles Johnson vice-presidents. Master announced that the binder twine had come.

Tuscola Co.

C. M. PIERCE, Cor.

GENERAL TOPIC FOR AUGUST.

LIVING ON THE FARM.

Question 1. Do farmers live as well and economically as they might?

Question 2. How can life on the farm be made more attractive and enjoyable?

SUGGESTIONS.

This topic is presented for the purpose of a little self-examination, and the first question involves our manner of living. We know that times are hard; all kinds of farm produce are low, and with many it is difficult to make both ends meet, especially if there is a mortgage on the farm; but farmers surely have the advantage over the poorer classes in cities at the present time in having enough to eat. No farmer's children in all this broad land are obliged to go to bed hungry because of the scarcity of food. The Bible says, "The husbandman that laboreth must be first partaker of the fruits," but sometimes farmers feel obliged to send the best to market, and what is left for the home table may not be as palatable as might be desired, and the variety of food may be limited, but it satisfies hunger, and imparts a greater or less degree of vitality and strength to the body. At this point the question arises, whether farmers might not better provide more nutritious food for their tables with greater variety, and at less cost than what seems to them the most economical methods at the present time. No small degree of the enjoyments of life are found at the well-prepared table. Not only is there much gratification in eating well-cooked, palatable, nutritious food, but the vitality and strength which it imparts are absolutely necessary to any considerable degree of enjoyment in life. If farmers can have better and more nutritious food at less cost than at the present time, it is certainly an object for them to study the food question. Thousands of farmers are to-day carefully studying the question of foods for their dairy stock from the standpoint of production and economy, who have never given a moment's thought or study in regard to the food for themselves and their families; but the time is at hand when the question of food for the family on the farm will be studied by intelligent, thoughtful farmers and their wives. The latter are, of course, especially interested in the matter. Boards of agriculture and some experiment stations are already at work in this direction. Illustrated cooking lectures in connection with institute work have been given in several States with most gratifying results. Prof. W. O. Atwater, director of the Connecticut Experiment Station at Middletown, has been making a special study of human foods for many years, giving particular attention to the value of milk, and he has published many valuable articles upon the subject of human food, and would doubtless be willing to send some of his bulletins to those interested in the matter. If the farmer can get greater profits by making up and feeding a "balanced ration" to his cows, surely the farmer and his wife together can afford to give a little study to the rations of the family, if it will enable them to live better and at less cost. What proportion of farmers have such garden vegetables, fruits and berries, as naturally belong to the farmer's "bill of fare?"

The second part of the topic relates more particularly to the environments and work of the farm. Much has been said and written about keeping the boys and girls on the farm. While the question of dollars and cents has much to do about the discontent of farm life, it is not always the leading factor in turning the young people, and sometimes the older ones, towards city life with its manifold temptations, and the multitude of moral and financial

wrecks which are found on every hand. In a greater number of instances it is the unattractiveness of the farm home, and the irksome tasks that are every day laid upon the boy or girl, with little or no recreation, that makes them solemnly resolve that when the opportune time comes they will surely bid adieu to the farm and farm life, and seek their fortunes elsewhere. Another factor which enters into the question of desertion of the farm by the young people, is the continual fault-finding of many fathers and mothers with the conditions of farm life.

And being thus taught and treated, it is little wonder that the boys and girls become disgusted with the farm which is, or should be, the most attractive place in the world on which to live. In most sections it costs but little to beautify the surroundings of the farm house. Trees, shrubs, plants and flowers can be made to grow in abundance, and give a living charm to the humble or the palatial farm home, which cannot be found in the city with its pavements and bare walls of brick or stone. The furnishings and adornments of the farm home need not be elegant and costly; but with little effort and skill the rooms may be made cheerful and inviting. It is in the line of true economy for the farmer to provide himself and family with a judicious amount of the best reading matter, both books and papers. Tasks for the children need not be long; they can be varied, and words of cheer and encouragement given, and with occasional days of recreation a larger amount of work will be done than when the continuous, monotonous, humdrum method is followed. The farm home should be a place of refinement and culture, and all of its inmates should be ladies and gentlemen in the truest sense of the word. A full and free discussion of this part of the topic will be helpful to all the members of the Grange.—Lecturer of National Grange.

EDUCATION, THE OLD AND THE NEW.

(Extracts from a paper read by N. R. Dryer at Casnovia and Ashland Teachers' and Patrons' Association.)

"Education is the result of intellectual activity, the mind becoming stronger in consequence." "Moral education should be based upon the idea that 'doing one good should increase the inclination to do another.'" That "one pure thought should make room for more of the same kind."

"That we find some to condemn and much to commend in both the old and the new. The old having the advantage in that they show the fruits of their labors, and their record lies all before us. We trust and pray that the new may make as good for the future."

Would condemn such expressions as "new," "up-to-date," etc., as it creates a tendency to disrespect for that which has been tried and proven. A disposition to consider "Thou shalt love thy neighbor as thyself" as too old, and He who said it a "back number."

A WORD FOR WOMAN.

Reform in our laws which give certain rights to woman while others belonging to her are withheld. By our laws the wife has only a dower interest in the property for which she has labored equally with the husband to accumulate. If the wife dies first, all her interest in the property she has earned goes to the husband to be disposed of as he may see fit. She can make no will and cannot provide for any of the children she has reared and loved. She is treated at her death as though she never had any rights in property while living. Provide by law that any will made by the husband should not be valid unless signed and acknowledged by the wife, same as in deeding property. This denying to the wife her right in property which she has made such sacrifices to earn, is a mean streak in man's nature, bred in from generation to generation and should by some means be eliminated and he should be purged of it before the close of the nineteenth century. Give to woman, God's angel on earth, all her natural rights.—S. S. Bailey at Kent Co. Old Residents' Association.

Portland, Me., and Return, Eleven Dollars, via Michigan Central.

Through the heart of the White Mountains and only Eleven Dollars for the round trip. Tickets sold August 5th, good for return to initial point until August 16th. Correspondingly low rates from all Michigan points. Call on Michigan Central agents for full particulars.

The Household.

CONDUCTED BY MRS. ELLA E. ROCKWOOD
FLINT, MICH.

We should be pleased to have any of our readers who take an interest in household topics, send in their views and opinions upon any subject which is under discussion, or which they wish discussed. The invitation is general, and we hope to see it accepted by many. Address all letters for *The Household* to Mrs. Ella E. Rockwood, Flint, Mich.

THE MAGDALENE.

I.
Upon her pulseless heart I lay
These roses white and red;
And o'er her darkened past they may
Some quiet beauty shed.
O, Pharisee, scorn not the spot,
Her presence now can harm thee not.

II.
No voice can through the marble lips
Forgiveness now implore;
Upon the form Death's mantle slips,
Earth with its wrongs is o'er.
Curse not her clay, but on thy knees
Thank God for purer years than these.

III.
Thy pride ne'er knew the tempter's power,
Nor yet the grief intense,
But God above marked every hour,
Of sin, of shame, of penitence.
O let the spotless roses rest—
Emblems of Christ, upon her breast,

IV.
"He without sin," the Savior said,
"Be first to cast a stone;"
Let Charity's most gracious bread,
On these dark waves be thrown.
The perfume which these blossoms shed
Is supplication for the dead.

HOME CHATS WITH FARMERS' WIVES.

A GLIMPSE OF HOME LIFE.

From time to time letters are received which say: "Please tell us in the *Household* something about yourself, your home life and duties;" and while it would be egotistic to assume that all will be interested in this, I have taken it for granted that many who read these columns from week to week will be. There is nothing out of the way in betraying a degree of curiosity concerning those with whom we meet even through the medium of such a long-distance telephone as the *Michigan Farmer*.

Several years ago our esteemed correspondent, Evangeline, gave us in the *Household* an account of one week's transactions at her home, and one and all manifested the greatest interest therein. It is perfectly natural for those who read the thoughts of another as expressed in the printed page to desire to know something of the writer's home.

Perhaps no writer for the agricultural press has been more successful in gaining friends from far and near than Mr. T. B. Terry, and he has always written more or less of his home life and family. We all like to read these things—it brings us more closely in touch; we seem to know each other better. Those personal letters received from time to time which tell of the writer's home, of the husband, the children, the ones in fact that bring us to know something of the everyday life are always prized, and it is with the belief that this feeling is shared by our readers that these lines are written.

You will find them nothing out of the ordinary of the average farmer's wife's life.

To give some idea of your *Household* editor's life it may be well to give a synopsis of one day, and that day may as well be this as any.

In order to give a better understanding of it let me say that our farm is one where dairying is followed as a specialty.

We have been making butter for private customers for years, and this spring we added an outfit for Pasteurizing milk. So now if anyone can show up a busier place than this we will willingly take second place. We have over 30 Jersey and Guernsey cows, so you see we have considerable milk to attend to. An engine was put in recently with which to do the dairy work, Pasteurizing, churning, working the butter, etc., and the steam engine gives us plenty of noise. As the dairy room is attached to one part of the house noise is very much in evidence during the early part of the day when the machinery is in motion. This is a poor place in which to indulge in morning naps; in fact very few farmer folks have time to indulge in such a luxury anyway.

But I set out to tell you of to-day, different from other days only that it is Monday.

The milk wagon has to start early so the alarm clock is set at 4, but it is rare that the first peep of day (which is somewhat earlier than that hour at this time of the year) does not find me waking, for I am one of that class of women who cannot sleep if there is anything demanding attention, whether it is my place to attend to it or not. I have the feeling, which is wholly unwarranted, that everybody in the house will oversleep unless I am awake to see that they do not. So, really, you see, my day's work begins quite early in the morning.

After the men are up and gone to the barn our faithful Bertha rises to prepare breakfast, and a little later I am upon the scene.

The first thing is to bottle the cream and pack it in ice for delivery with the milk. The calves have to have milk and the cream from this is what we sell, and we still make butter, too. The Pasteurized milk is prepared the day before selling and is kept in the refrigerator.

At half-past 5 we have breakfast. Then the milk wagon is loaded, each crate of bottles containing a lump of ice, the horses hitched on and away they go.

After breakfast this morning two business letters were written, ready to send to town by the milkman. It requires but few words to write an average business letter, so it did not take very much time to write them and they were easily disposed of while the horses were being hitched to the wagon.

After breakfast I help about the dishes, feed the chickens, brush up the sitting-room and put it to rights, then go up-stairs and attend to my portion of the chamber work, this being the care of two rooms. Returning below stairs my own room is put in order.

The cream is next attended to, for there is a churning to be done to-morrow, and it must be prepared for ripening. Then I sit down for a short period of writing or preparing copy for the *Household*.

I am interrupted once to sew on a button, and once to see a child who has called on an errand. Just get nicely at work again when the announcement is made that the milk is ready to be bottled. This calls for my assistance, for two can do it more rapidly than one, and I drop my writing, and, donning a big apron, once more wend my steps toward the dairy-room, where the steady whirr of the machinery, the rush of steam and the attendant confusion betray a state of things not at all in keeping with the usual quiet of a country home.

The presiding genius of the Pasteurizing vat fills the bottles, I slip on the paraffine caps, or covers, taking them out of the hot paraffine one by one and pressing them quickly into the mouths of the bottles. Crate after crate is filled with the ice-cold milk and set into the refrigerator for to-morrow's sale. Then the "cleaning up" (which is the worst part of it) has to be done, the machinery stops, and we are through for to-day.

The clock is striking 10 as I close the door of the dairy-room, and that means one hour for writing, then it will be time to begin dinner, for upon wash day the maid is relieved of as much of the other work as possible, since washing consumes the entire forenoon.

Pen in hand I am seating myself to my work once more when I am reminded of the lemon pie filling and crust, prepared on Saturday for Monday's dinner, but not yet put together. These are brought from the refrigerator, the filling turned into the crust, a meringue whipped up for the top, browned a moment in the oven and set aside ready for use. The clock marks quarter past 10 when the pen is picked up once more.

At 11 preparations are begun for dinner, at half-past I ring the bell for the men, and promptly at noon we sit down to the table.

After dinner, the washing being not quite finished, I wash the dishes, tidy JACK N. N. N. the kitchen, and then change my dress for the afternoon. Before this is accomplished the rumble of wheels is heard which heralds the coming of one of the men who has been to town with a load. He has not been to dinner, so I hastily finish my toilet and make this ready for him.

During the afternoon three good hours of work are put in, but not hours free from interruption by any means. Paterfamilias comes in to show

me the shipping bill of some goods just received and to talk over the why and wherefore of the charges being more than they were the last time, as well as some other matters. Through the open window the sound of a hen's exultant cackle reaches my ear and the pen is dropped while a search is made for the nest.

As I pass through the back yard the chickens' drinking pan is seen to be empty and a trip is made to the well to refill it. The garden gate is passed and the thought comes that those beets must be nearly large enough to boil. Investigation reveals the fact that they are and an armful is brought along to the house.

Settling myself once more to my writing, perhaps fifteen or twenty minutes pass when the rumble of approaching wheels is again heard, and peering out of the window at my side I see the milk wagon coming back. This means another hungry man. Bertha is called this time to get him something to eat and the pen goes scratching away again.

Soon there is a tap at the door and the mail is brought in. Of course this must be looked over. Two letters for the *Household* are welcomed and laid one side ready to be used in their turn, others read, and one, requiring prompt reply, answered.

Work is resumed once more and progresses steadily until a caller is announced.

This takes half an hour of time, cheerfully given, as a pleasant chat is always enjoyed, then comes another tap at the door and a pleasant voice asks, "What shall we have for supper?"

This planned, another half hour is spent in writing. Then the men come in with the milk, proclaiming thereby that the chores are done, and soon we are ready for supper. After that there is a short time spent in caring for the flowers, weeding, watering, etc.; then a visit to the pasture to see a favorite horse and take her some grain. An hour or so on the piazza with the day's papers, where two or three members of the family gather for a while in the gloaming, then a tour around the house to see that all is well and we retire for the night, for they who are up with the lark must go to bed with him also.

Now I think I hear some of you saying, "Why, she does the same things that we do."

Of course she does, and like everybody else upon a farm we find there is no chance to shirk. To-morrow it will be baking, churning, some ironing, a bit of sewing, with always and every day the milk to be taken care of, and writing coming in between times.

The days are busy ones with us all. Sometimes I think how much nicer it would be if we had more time and opportunity to enjoy ourselves.

If we could travel, visit foreign countries, or even see something more of our own, what a satisfaction it would be.

Many of us farmer folk have never been far from home. We long to see the mountains and the ocean. We would visit far-famed California and see the mighty wonders of the great west. We would so much enjoy more time to read, to study, to inform ourselves upon the topics of the day. We would like to pay back some of the visits that have been made us by relatives and friends both near and far. We would like to visit Washington and see the beautiful and interesting things which abound in the capital city of our nation. Many and many a man and woman who reads these words has never seen Niagara, yet living within a few hours' ride of that matchless marvel of the world.

We might go on and on, but what would it avail? Each of us is placed where we are and just as we are to live our lives as best we may.

We are not dependent upon these things for happiness. Thank God that may be ours in the humblest cabin.

Uneventful lives we may lead, yet they may be lives which will leave an imprint for good long after we have passed from earth. Bounded by four walls is many a woman's world, yet from that world have gone forth influences which have been mighty.

Try a plaster made of lard, softened just enough to spread easily, stirred thick with wheat flour, for lung trouble. It has been successfully used in cases of pneumonia. Spread on a cloth of generous size and apply to the painful spot.

HIRED GIRLS ARE INDEPENDENT.

Dear Editor:—Something tells me that it is my turn again to visit the *Household* family, and before I finish reading it this morning, I take my pen and paper in hand to say a little more about the poor hired girl. I, for one, wish that article could be read by the hired girls. I believe it would encourage them; and not only those girls that are obliged to work, but all who have that desire of being independent. I, a mother of four children, doing the work for seven in family, have that same desire of a few cents earned with my own hands, and have this last week made a Mother Hubbard dress, a shirt waist and full skirt and two chemise, all for one lady and all for one dollar. I did that sewing at times when I needed to sit down, but could sit down easier, knowing that I had a little ready cash coming when I got them done. We women have enough to eat and probably all that is needed for clothing if not all we want. We have the butter and egg money to buy such things with, and if that is not enough a little more money brings up the rear, but it seems so nice to have a little something one earned themselves.

I do not want so much outside work that I would be obliged to neglect my own, but just give me a chance to make a Mother Hubbard every week for 25 cents, plain underclothes at 10 cents each, and other sewing accordingly, or even step in to help some neighbor with a day's work. I for one want to do so, and have a lighter heart and a little money for my reward.

A good girl working in a kitchen is worthy of all respect, and is respected I am sure. There are different classes of women, too. A girl brought up to work makes the very best wife and mother even though she was obliged to go out and work by the week to buy her clothes.

In my younger days I was an only child, but I helped others when I was asked to, and many a 50-cent piece I called my own, not father's money.

Let the girls and boys go and help a neighbor once in a while; sacrifice a little at home in order to do so. It learns them much more than you have any idea of, the different ways of doing different things, and how to get money, and the only way is to work for it.

If a lady asks for your 12 or 15-year-old girl to help her with her washing, don't say, "Oh, she is too young; I never let her do such heavy work," but say, "Yes, she can help," (not do it alone by any means), but she can turn wringer, help right along and not hurt her. It will be a lesson in education for the hands, mind and heart. Mothers, do not overburden your children, but they will be better prepared for the future if you commence in childhood and bring them up to thoroughly understand that work is needed to develop the mind and body. Let them have play too; do not deprive them of all the fun they can have, but encourage them, play with them, and when the time comes for work they will put forth all their energy for a time. Our boys cultivate corn most of the day, and along toward evening their father says, "Well, boys, let's go and wash up," or "You can go to town for some things that we need."

We find we can gain in the end by not discouraging the young. Give them a nickel now and then for doing some piece of work but do not hire them. Show them that their work is appreciated and do not hesitate to say so when it is well done. Do not grumble or find fault if it is not done as well as you would have done it yourself.

I enjoyed those coloring recipes in rhyme, and shall keep them by me for reference, and I also use baker's ferment that I took out of the *Household*, and like it very much.

Now, just a word to Allie. You will find country life has its ups and downs, but if you love this farmer boy as you should do, life will be very pleasant, and if you take hold and do your duty with a will, enter into each task placed before you understanding that that is your lot, and it is best to bear it uncomplainingly, you will find that "each dark cloud has a silver lining," a most truthful saying. Prepare yourself beforehand that you will be satisfied and contented with whatever is to be your lot. Much joy to you in the future, but I hope you escaped cooking for six or seven men working in the harvest field these hot days.

I think I recognize "Mother of Four" by the blouse waists and panties and little suspenders.

NANCY JANE

For the Household.
TO MRS. L. W. M.

I work in my busy kitchen
And think of the things I have read,
Think of the life of the mothers
As I may by the words they have said.
Here, the persistent ambition
For a house exquisitely clean,
And there the bride in her beauty
Just entering in on the scene.

The patient effort of this one
To make home a haven of rest
For the dear stay-at-home husband
When she would like church-going best;
And that's the mother of children,
With face so cheery and bright,
We see her now in the gloaming
Give each one a sweet good night.

My heart goes out to the mother,
As she sits in the twilight dim,
Sitting and rocking her baby,
Softly singing the sweet old hymn.
I know that your heart is aching
For the one that is gone before;
Gone, only to bring you nearer
To the beautiful golden shore.

Who can tell what care and trouble
Would have come to your child in this
life?
Now he is happy with Jesus
And free from all envy and strife.
The Shepherd is all compassion
And would heal the wounds of His
sheep,
So sends you another darling,
Which you in your loving arms keep.

How can we help but be better,
Looking at the child He has given,
Thinking the words of the Savior:
"Of such is the kingdom of heaven."
So as you cherish your darling,
God helps you to guide her aright;
Strengthens you now in your weakness,
Her future, through you, may be bright.

And when you are old and feeble,
And she has to womanhood grown,
May you, by the life of your daughter
Be blest for the good you have done.
Now as through life you will journey
May the dear Lord be with you still,
Bring joy and peace to the mother
Who gave up a child to His will.
Hampton, Mich. MRS. J. B. S.

THE BETTER WAY.

I feel greatly indebted to our editor and to the others who write for the Household for the many kind and encouraging letters they have written. They have helped me very many times. I feel in return that I would be glad to say a few words that would be of help to some of you.

I have meditated much on the letter of July 3d, "Watching Ourselves," and as the busy season is upon us, we that are farmers' wives, need to take heed to watch ourselves. Dear sisters, when you rise in the morning won't you kneel and offer up a silent prayer to our dear Father in Heaven to fill your hearts full of love? That will keep us sweet and patient while about our work during the day. Don't you know that love in the heart tempers all things? It makes us patient with others, charitable towards their mistakes, quick to see the good in them and ready to help them to do better.

The habit of finding fault is so common—any one can find fault. We see faults and we like to speak about them. But when the heart is full of love it puts a restraint upon us and not only upon our fault finding, but also upon all unkind judgment of others. There are so many men and women who are walking under such burdens of care, and sorrow and temptation that one word of censure, or criticism or complaint may cause them to fall under their load. We need more love—love that will never add to another's burdens; that will not judge or condemn another, but will give cheer, encouragement and inspiration of hope.

We may as well all confess that we are apt to be critical. We fall so easily into the habit of saying unkind things of others. We do not mean to hurt any one. We should remember how Jesus dealt with his disciples in their poor, faulty work. He commended what they did. "She hath done what she could," were his words of one who had done a deed of love, which the older disciples were criticising. May we try to live from day to day our very best for God, even though we make many mistakes. Some one has said that many of the most beautiful things in heaven are earth's blunders, things that God's children tried to do to please Him.

I once read of a home in which the most sacred and precious treasure was a piece of puckered sewing. A little child one day picked up the mother's sewing—some simple thing she had been working on, and after half an hour's quiet, brought it to the mother and gave it to her, saying: "Mamma, I've been helping you, cause I love you so."

The stitches were long, and the sewing was puckered, but the mother saw only beauty in it all, for it told of her

child's love and wanting to please her. That night the little one was taken sick and soon went home. No wonder that mother keeps that piece of bungled sewing among her choicest treasures! Nothing among all her household possessions means to her half so much as that puckered seam. May not this be the way in which God looks at his children's homeliest efforts to do things for Him?

Two things we are here to do. We should do our own work the best we can, being so patient and kind with our loved ones about us, and we should give cheer and encouragement to every one who comes within our influence. What a much better way to live than to censure and blame and find fault with others.

A. E. M.

MRS. MAC'S OPINION OF IT.

Yes, I say the poor hired girl, and continue to say so until some definite idea is given of what a hired girl's duties consist of. A hired man's day's work comes to an end sometime, but the hired girl seems to have no idea when her's is done.

I was told recently by a young girl working out that she had no real time when she was off duty from early morning until bed-time. She said, "I would be glad to know when a girl's day's work is done, and if I cannot have an hour or so to do as I please." The work was not hard, but there was the feeling that she was always at someone's call.

I can understand perfectly why a girl prefers to work in a shop or factory at very small wages rather than work in a family. I have seen the look of pleasure on the girl's face when the clock says it is time to quit work, and with quick steps she hurries homeward, where she knows that mother will have a nice supper awaiting her, and she will have a pleasant evening with her family and friends. But when the hired girl's day's work is done (if it is ever done) there is no thought of spending the evening with those she loves, and when she is allowed to share the family sitting-room she is as much alone and apart from the real life of the family as if she was marooned up on some desolate island. If she has company, her isolation from friends makes it very unfortunate for her, and often exposes her to unpleasant remarks; for where one woman takes a real friendly interest in a hired girl and treats her as she would like to have a daughter treated, many pay her her wages grudgingly and make it very unpleasant for her in numerous ways.

I know a very nice girl who worked for a Mrs. Would-be-high-toned, and of course she did not want the girl to eat at the table with the family. I do not blame her for that, for I think the hour spent at the table is the most beautiful hour of family life, and I blame no one for keeping it sacred to the family. But when evening came she did not want the girl to share the sitting-room, and she had told her to put out the fire in the kitchen stove as soon as her work was done. The girl asked her where she could go as it was cold weather and one could not stay in a room without a fire, and the woman told her she could go to bed.

It seems very strange to me that any woman with a family should envy a working woman her lot. So many hours a day are given to all, and in a measure we can all say how we shall spend them, and we must each choose which shall be music to our ears, the "jingle" of the siller or the laughter of little children. And it seems to me that the woman who chooses to be the mother of a family is very unreasonable if she expects to enjoy the leisure and pocket-money of the lonely woman and also reap the harvest of love from her children.

It is at the present time a serious undertaking to rear a large family. The parents that have not been so fortunate as to inherit a home from the past prosperity of the country, will find that they must deprive themselves of many comforts and all the luxuries if they would dress and educate a family. But who will say that it is not a beautiful investment! Think of the huge dividends of love and cheer sure to come in the future to the parents who have done well by their children. Compare this with the lonely old age of the childless person. A woman will never feel the loss of children so much as when she attends some commencement or children's day exercises. She will feel as she looks

upon the faces of the proud, happy mothers that she is in a world of which she has no part, and I doubt not but that she would give all the money and luxury she has ever earned if she could but call one of those bright young creatures her child.

What can measure a mother's pride and happiness when she looks upon a fine young man and says, "He is my son?" and, sad to say, what can fathom her sorrow when she looks upon a young man sunk in shame and degradation and says, "He is my son?"

The woman who is without children may miss life's greatest happiness, but she is spared its greatest sorrow.
MRS. MAC.

SELLING CREAM—MAKING BUTTER.

Dear Editor and Sisters of the Household: Will you permit me to come in for a little chat? I have been here once before, but think none of you remember me. I am a mother of four children and do all my work, including sewing and knitting, and through haying milked four cows every night.

Why do not some of the sisters write about butter and eggs? That generally belongs to woman's discussion, and it would interest a great many. We sell our cream and generally get four and a half pounds of butter a day. Nothing is nicer in summer than to sell the cream. In this terrible heat no one can make good butter unless they have a good cellar, and that we haven't got.

I do all my baking early in the morning before it gets so hot. This morning I had my bread baked before half past seven. Let me tell you how it is made.

At noon when the potatoes are done I take out six of them in a gallon crock, mash them as fine as possible, then put in a tablespoonful of salt, two of sugar and one of flour, mix thoroughly, then put in a little cold water and mix again, then drain off all the potato water or enough to make the crock full, and when cool put in one and a half yeast cakes, set in a cool place to rise. When light it will be all foam on top. The last thing before going to bed I set the sponge, and the first thing in the morning mix it and knead about ten minutes. Then by seven or eight o'clock have it all baked, which is quite a help this hot weather.

A GERMAN WIFE.

Fowler.
(You are indeed wise to sell cream instead of trying to make butter.—Ed.)

THE EQUAL OF ANY \$50 MACHINE FOR ONLY \$18.

Jerome, Mich., July 1, 1897.
Editors Michigan Farmer, Detroit, Mich.:
Gentlemen:—Enclosed find order for fifty cents for one shuttle. My Michigan Farmer sewing machine has been in use for seven or eight years, and all the repairs that have been needed was one package of needles and this shuttle. It has done as good work as a \$50 machine.

Yours truly,
MRS. G. A. BLEECH.

The foregoing letter fully explains itself. It is from a lady who after seven years' use declares that her Michigan Farmer sewing machine has given her as good service as would one costing almost three times as much.

If you are thinking of buying a machine be sure to investigate the merits of the new improved Michigan Farmer and save the agents' exorbitant commission.

You will run absolutely no risk as we guarantee each machine and will replace or refund money for any that prove defective in any way.

Furnished in either oak or walnut case, freight prepaid to your nearest freight office for only \$18, or with Michigan Farmer one year for only \$19. Same machine with drop head for only \$20, or with paper one year \$21. In this machine the head drops down out of sight when not in use, making a very convenient table.

Write us for further particulars and we will save you money.

CONTRIBUTED RECIPES.

Ginger Cookies:—Two eggs, two cups sugar, one cup molasses, one cup thick milk (or buttermilk), a little over a cup of lard (about three tablespoonfuls over), two teaspoonfuls of soda, a heaping teaspoonful of ginger, a pinch of salt, and flour enough to roll easily.

Fruit Cake:—One cup sugar, one-half cup butter, one-half cup sour milk, one-half teaspoonful soda, one tablespoon-

ful of molasses, two eggs, well beaten, one and one-half cups flour, one teaspoonful each of vanilla, cloves, cinnamon and nutmeg, and one cup of raisins.

Red and White Marble Cake:—White part: Whites of three eggs, one and one-half cups sugar, one-half cup butter, one-half cup sour milk, two cups flour, one teaspoonful cream tartar, one-half teaspoonful soda. Red part: Yolk of one egg, one-half cup red sugar, two tablespoonfuls each of butter and milk, and one-half teaspoonful each of soda and cream tartar. Season to taste.

Dried Apple Fruit Cake:—Two cups dried apples, cut up and soaked over night in water. In the morning add three cups of molasses and one teaspoonful each of cinnamon, allspice and nutmeg. Cook slowly for two hours until reduced to one-third the quantity. Cool; then add four eggs, two-thirds of a cup of butter, one teaspoonful of soda, dissolved in one tablespoon of water. Flour enough to make a stiff batter. This will make two loaves, will keep a long time, and is excellent.

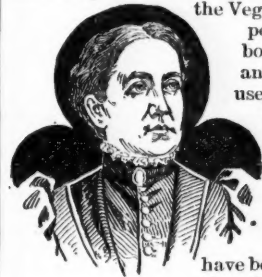
Do not allow ice cream to remain in the can all night. It may absorb a poisonous substance from the tin, rendering its subsequent use dangerous.

When writing advertisers please mention that you saw their advertisement in the Michigan Farmer.

MRS. KRINER'S LETTER

About Change of Life.

"I suffered for eight years and could find no permanent relief until one year ago. My trouble was Change of Life. I tried Lydia E. Pinkham's Vegetable Compound, and relief came almost immediately. I have taken two bottles of the Vegetable Compound, three boxes of Pills and have also used the Sanative Wash, and must say, I have never had anything help so much, I have better health than I ever had in



my life. I feel like a new person, perfectly strong. I give the Compound all the credit. I have recommended it to several of my friends who are using it with like results. It has cured me of several female diseases. I would not do without Mrs. Pinkham's remedies for anything. There is no need of so much female suffering. Her remedies are a sure cure."—Mrs. ELIA KRINER, Knightstown, Henry Co., Ind.

COOKING MADE EASY

Woods' Kitchen Cabinet

has a place for everything and everything in its place. Its use lightens labor and saves waste.

Roll Top and Drawers for Table Linen

are special features.

A fine piece of furniture—economical—an ornament in any household. It is made of hard wood, handsomely finished and guaranteed best workmanship throughout. Descriptive circular free.

QUEEN CABINET CO. 208-210 Monroe St. Chicago



COSTS NOTHING

To see and examine any instrument we make, ORGANS, \$29.00; PIANOS, \$121.25. Highest grades made, finest finish, best tone, prices far lower than any other maker. GUARANTEED 25 YEARS. Violins, \$15.00 and up. Guitars and Mandolins \$2.50 and up. FREE the handsomest, largest and lowest priced Organ, Piano and Musical Catalogue ever published. Write for it. REFERENCES: WETMORE, HITTENBACH, CHICAGO, ILL.

Nat'l Bank or Nat'l Bank of Illinois, Chicago; German Exchange Bank, N. Y.; any Express or R. R. Co. Write for free Catalogue today. Address SEARS, ROEBUCK & CO. (INC.) CHEAPEST SUPPLY HOUSE ON EARTH, Failor, Desplaines and Wayman Bldg., CHICAGO, ILL. (Sears, Roebuck & Co. are thoroughly reliable.—Editor.)

Legal Department.

CONDUCTED BY EARL D. BABST,
56 Moffat Building, Detroit.

Straw Part of Crop.—Subscriber, Ver-
non, Mich.—The straw is as much a
part of the crop as the grain, and un-
der a cropping agreement is divided in
the proportions as the grain.

Game and Fish Laws.—J. F., Hills-
dale, Mich.—The game and fish laws
published in full would take the entire
space of two issues of the "Farmer."
Particular information will be gladly
furnished.

Manure on Farm Passes by Deed.—
Subscriber, Tekonsha, Mich.—A. owns
farm and deeds it to B. Does the
manure on the farm belong to A. or
B?—Manure belongs to B, passing by
the deed.

Riding Bicycle on Sunday.—Sub-
scriber.—Has a man any right to go
into the road and take a bicycle from
a boy and keep it until Monday, be-
cause the boy rode past his house on
Sunday?—No. Such an act is a daring
invasion of the right of personal lib-
erty.

What Constitute Threats.—Sub-
scriber, Church, Hillsdale County,
Mich.—A. inquires of B. confidentially
about C. B. relates reports of the
neighborhood. C. hears of it, and
comes to B. and demands \$50 to settle
the matter or he will sue B. B. pays
\$50. Has C. committed any offense?—
No. B. has voluntarily paid \$50 rather
than defend a suit. If the money was
paid under duress it can be recovered
from C.

Lien for Get of Stallion.—F. C. J.,
Marion, Mich.—Pastured my stallion
in well fenced lot, and my neighbor
K. turned two mares in adjoining lot,
which was not fenced on one side.
Mares got with stallion and one got
with foal. Can I collect service fees?
—As a general proposition we would
answer "No," but if K. turned mares
into the lot, which was defectively
fenced, for the purpose of getting ser-
vice without paying stallion fees, we
would advise you to file lien on colt.
Be certain of your ability to give sat-
isfactory proof of your neighbor's de-
sion before taking lien.

**Taxation—Exemption of personal
Property.**—W. W., Mich.—Is money at
interest exempt from taxation to the
amount of \$200, if there is not enough
other personal property amounting to
\$200?—The statute provides for the
exemption of "Personal property owned
and used by any householder, in
connection with his business, of the
value of \$200." (Laws of 1895, p. 109.)
The personal property thus ex-
empt means farm implements, ma-
chinery, tools, etc., used in the work
of the farm of the value of \$200.
Money at interest is not personal
property coming within this exemp-
tion.

**Attaching Persons to School Dis-
tricts.**—R. K., Biggs, Mich.—Can a
board of school inspectors attach per-
sons residing in a township, and not
in any organized district, to a school
district without attaching their prop-
erty, and will they when attached
have all the rights in the school dis-
trict of a person living within the ter-
ritory organized into the district, ex-
cept as provided in said section 5042,
and should the director include their
children in his census report?—Yes to
all the above questions. Section 5042
is intended to cover just such cases,
and persons so attached are to be con-
sidered as residing in the attaching
district. The boundaries need not be
changed in order to attach certain
persons to the district.

Fees of Appraisers of Estates.—Man-
ner of enforcing rebate for use of wide
tire wagons.—B. F. S., Genesee Co.—
Appraisers of estates of deceased per-
sons are entitled to \$2 for each day,
and \$1 for each half day, and six cents
a mile for travel in going and return-
ing. The Probate Court may grant ad-
ditional compensation. 2. Make new
affidavit and if highway tax is a labor
tax, present and file affidavit and refuse
to work the tax covered by allowance
specified by affidavit for use of wide
tire wagons and permit overseer to en-
force by suit. If the highway tax is
a money tax your only method of pre-
ceding would be to pay tax under
written protest, attaching affidavit for
use of wide tire wagon, and sue for
tax wrongfully paid. Overseers all
over the State seem loath to comply
with the provisions of this act and a

test case would be a wholesome les-
son.

**School Board Limiting Time of Pre-
sentment of Checks.**—E. N., Oakland
Co., Mich.—Can a school board limit the
time of presentment of their order on
a bank in payment of teacher's salary?
If the bank fails, are a teacher's back
orders the same as a deposit, or is
the school treasurer liable?—By the
word "order" we take it that a bank
check is meant. The law is well set-
tled that if the person who receives
the check, and the banker on whom
it is drawn, are in the same place, the
check must, in the absence of special
circumstances, be presented the same
day, or, at latest, the day after, it is
received. If in different towns, the
check must be forwarded for present-
ment on the day after it is received,
at the latest. If the bank fails within
the above time the drawer is liable;
if after above time the holder would
practically be in the same position as
a depositor. The time of presentment
may be extended by the drawer, but
when extended the liability of drawer
terminates at expiration of extension.
The school board has the power in
question, and back "orders" are prac-
tically a deposit.

The Markets.

WHEAT.

It is a fluctuating and uncertain market
at present for this grain. The big crop is
beginning to come forward, and an in-
crease in the visible supply knocked val-
ues down several cents early in the week,
and the loss has not yet been fully recov-
ered. The strong factors in holding up
prices at present are the foreign demand
and the very short supply of old wheat.
It is yet too early to predict the future of
the market, with so many elements of un-
certainty to be considered.

The Hessian fly has attacked the wheat
fields of South Dakota and southern
Minnesota.

It is not believed the wheat crop of
South Dakota will be any larger than a
year ago, although there has been con-
siderable increase in the acreage.

The Modern Miller says: "The most
prominent feature of the week in the
grain trade is the delay in threshing
operations. In the southeast and Missis-
sippi valleys rain has interfered with
threshing, and from the southwest come
reports that wheat is going into stack,
the producers believing in higher prices."

A correspondent writing the Farmer
from Sanilac county says: Crops are all
that could be desired. Never saw wheat
heads so large and so well filled.
Taking an all-round view of latest
news from France, it must be said that
the outlook for the wheat crop, which is
now being harvested in many parts,
grows worse rather than better. The
Journal de l'Agriculture says that the
weather in France in the second week in
July was favorable in some districts, but
very unfavorable in many others. The
Bulletin des Haïles says that the pros-
pects are decidedly worse than before,
and the best informed authorities do not
now expect a wheat crop of 35,000,000 qrs,
against 42,500,000 qrs last year, although
the important districts of the north are
more favorably spoken of than other
parts. The Marche Francaise also gives
an unfavorable account, and says that
the deficit in the yield has been augmen-
ted by the recent storms.

Prime sums up the situation as follows:
There is no doubt at the present time
that the spring wheat crop in the Red
river valley is going through one of its
usual trying periods which it is generally
subjected to before it matures. Some at-
tribute the cause of damage to wheat by
blight, to early frost and later red rust
that hurt the vitality of the plant, caus-
ing blight. But what seems very rea-
sonable is the fact that the frost of last
May or the first of June did the damage,
killing the stools, and instead of having
a very heavy stand of wheat, with few
exceptions in North and South Dakota,
and northern Minnesota, the stand is
thin.

The Russian official crop report July 5
indicated that the winter wheat was gen-
erally good in the west and southwest
and unsatisfactory in the southeast and
east, and most unsatisfactory in the
northeast. The spring wheat crop was
much better and was considered good in
the west, southwest and north, but poor
in the east, southeast and central prov-
inces.

The Dixie Miller, Nashville, Tenn.,
says: "The flour and grain situation has
undergone no material change during the
past few days. After ten days of wet
weather farmers are resuming threshing
and in a few days will have finished all
along the line. Reports continue to con-
firm the fact that we are taking care of
the largest and best wheat crop ever har-
vested."

Advices from every wheat-growing
country in Oregon show that the wheat
crop will be the largest in the history of
the state. The total crop will amount to
about 18,000,000 bu. The wheat appears to
be of excellent quality.

The first new wheat brought into Port-
land, Iowa county, graded No. 2 red, and
sold at 70 cents per bushel. It was re-
ceived on Thursday of last week, July 22,
amounted to 400 bu, and was grown by
Robert Ramsey.

The following table exhibits the daily
closing sales of spot wheat in this mar-
ket from July 10 to July 29, inclusive:

	No. 1	No. 2	No. 3
July 10.....	74½	74½	74½
" 11.....	74	74	74
" 12.....	74½	74½	74½

" 14.....	77	77	74½
" 15.....	78	78	74
" 16.....	78½	78½	74½
" 17.....	77½	77½	74½
" 18.....	77	77	74
" 19.....	78	78	73½
" 20.....	79½	79½	76½
" 21.....	78	78	75
" 22.....	74½	74½	71½
" 23.....	75	75	72
" 24.....	74½	74½	72½
" 25.....	74½	74½	73½
" 26.....	75½	75½	72½
" 27.....	75½	75½	72½
" 28.....	75½	75½	72½
" 29.....	75½	75½	72½

The following is a record of the clos-
ing prices on the various deals in futures
each day during the past week:

	July.	Aug.	Sept.
Friday.....	74½	74	74
Saturday.....	75	75	75½
Monday.....	74½	74½	75
Tuesday.....	76	76	76½
Wednesday.....	75½	75½	75½
Thursday.....	75½	75½	75½

The visible supply of wheat in the
United States at Canada on Saturday
last was 6,032,000 bu., as compared with
47,142,000 bu at the same date a year ago.
As compared with the previous week, the
visible supply shows an increase of 708,-
000 bu.

DAIRY PRODUCTS.

BUTTER.
There is a better demand for prime
sweet flavored butter, both creamery and
dairy, owing to its scarcity, but the bulk
of the receipts are of medium to poor
quality and slow of sale. Creamery is
quoted by commission houses at 12½@14c,
but from farmers' wagons it sells at 14c
in small packages. It is the same way
with dairy; really choice dairy sells on
the market at 11@12c, while commission
houses quote it at 10@11c; fair to good
dairy is quoted at 9@9½c, and low grades
at 6@8c, according to condition. While
choice butter is selling close to the cost
of production, poor butter must be selling
much below it, for it costs as much to
make a pound of poor butter as a pound
of the choicest, and the difference in price
is from 6 to 8 cents. At Chicago there is
said to be a firm tone to the market on
good stock, a good deal of which is being
taken for cold storage; ordinary grades,
however, show no improvement. Quota-
tions in that market on Thursday were as
follows: Creameries, extra, 14½c; firsts,
12½@13½c; seconds, 11½@12c. Dairies, ex-
tras, 12c; firsts, 10@11c; seconds, 9c; pack-
ing stock, fresh, 8c. The New York mar-
ket shows little change since a week ago,
and is said to be in rather an unsatisfac-
tory condition. Arrivals are lighter, but
the demand from exporters has fallen off,
and much of the receipts are lacking in
quality. Quotations in that market on
Tuesday were as follows: Creamery, ex-
tras, per lb. 15c; do firsts, 14c; do thirds to
seconds, 11@13c; state dairy tubs, extras,
14c; do thirds to firsts, 10@13c; do tins, etc.,
9@13c; western imitation creamery, best,
12c; do seconds to firsts, 9½@11c; western
factory, June packed, 10½c; do current
packings, firsts, 9½@10c; do thirds to sec-
onds, 7@9c.

At the Utica Board on Monday last, 57
packages of creamery were sold at 15@16c.
Last week the range was 16c, and for the
corresponding range last year, 15@15½c.

At Little Falls on Monday last, farm
dairy butter sold at a range of 13@15c
per lb.

CHEESE.

Our local market shows some improve-
ment on fine full creams, but it is the
only one that does. The best full creams
are now quoted by the trade at 7½@8c
per lb., or ¼c higher than a week ago.
The Chicago market is quoted as quiet,
steady and unchanged. Quotations in
that market on Thursday were as fol-
lows: Young Americas, 7½@8c; twins, 6½
7½; cheddars, 6½@7½c; Swiss, 8@9c; lim-
burger, 5½@7½c; brick, 5@6c. At New
York the market has not improved, and
values rule about the same as a week
ago. The N. Y. Tribune says of the mar-
ket: "The receipts of full cream cheese
have shown a decided falling off the last
week compared with the previous week,
while quality has generally been irregu-
lar, as nearly all the current arrivals
were made during the extreme hot
weather when the milk was feverish, and
carried on the shelves in the same kind
of weather, and naturally showed more
or less effects. There has been a fair
demand from exporters for strictly per-
fect quality cheese in cool condition, and
such buyers have found difficulty in ob-
taining a sufficient quantity of quality to
suit them. In occasional instances 7½c
has been paid for exceptionally fancy col-
ored, but it has been extreme, average
best lots selling generally at 7½c all the
week." Quotations in that market on
Thursday were as follows: State, full
cream, large, fancy, colored, 7½c; do
white, 7½@7½c; do choice, 7@7½c; do fair
to good, 6½@6½c; do common, 6@6½c; do
small, colored, fancy, 7½@7½c; do white,
7@7½c; do choice, 6½c; do fair to good, 6½
@6½c; light skims, choice, 5½@5½c; part
skims, choice, 5c; do good to prime, 4½
@4½c; do common to fair, 3@3½c; full
skims, 2@3c.

At the Utica Board on Monday last 10-
569 boxes were sold at a range of 6½@
7½c, as compared with 6½@7½c the pre-
vious week. At the same date last year
the range was 6½@6½c.

At Little Falls on Monday 6,459 boxes
were sold at a range of 6½@7½c, as com-
pared with 6½@7½c the previous week.

At Liverpool on Thursday the finest
white and colored American cheese were
quoted at 3½d. per cwt.; a week ago
the quotations were 50s. per cwt., showing
a decline of 6d. per cwt. during the week.

DETROIT PRODUCE MARKET.

Detroit, July 29, 1897.

FLOUR.—Quotations on jobbers' lots in
barrels are as follows:
Straights.....\$4.25@4.50
Clears.....4.00@4.25
Patent Michigan.....4.75@5.00
Low grade.....3.50@3.60
Rye.....2.50@2.75
CORN.—No 2 mixed, 23c; No 3, 27½c; No 2
yellow, 23½c; No 3 yellow, 28½c.
OATS.—No 2 white, 23½c; No 3 white,
22½c; light mixed, 23c.
RYE.—Cash No 2 quoted at 40c.

BEANS.—Quoted at 62@65c per bu in car
lots.

BUTTER.—Quoted as follows: Cream-
ery, 14@15c; choice dairy, 10@11c; fair to
good dairy, 9@9½c; ordinary grades, 6@8c
per lb.

FEED.—In jobbing lots—Bran and coarse
middlings, \$10; fine middlings, \$11; coarse
cornmeal, \$11; corn and oat chop, \$10;
cracked corn, \$11 per ton.

SMALL FRUITS.—Black raspberries,
\$1.25@1.50 per 32-qt case; red raspberries,
\$1.75@2 per 32-qt case; huckleberries, \$2@
2.25 per bu; black currants, \$2.25@2.50 per
32-qt case; cherries, 90c@1 per bu; black-
berries, \$1.25@1.50 per bu.

APPLES.—New quoted at \$2.50@3 per
bbl.

CHERRIES.—75c@1 per bu.

PLUMS.—Quoted at \$1.50 per bu.

CABBAGE.—Michigan quoted at 75c@1
per bbl crate.

DRIED FRUITS.—Evaporated apples,
4½@5c; evaporated peaches, 9c; dried ap-
ples, 2c per lb.

HONEY.—Quoted at 11@12c in sections
for white, and 9@10c for dark comb; ex-
tracted, 5@6c per lb. At Chicago it is
quoted as follows: White clover, choice,
11@12½c; imperfect comb, 7@9c.

POULTRY.—Spring chickens, 11@12c;
fowls, 7@7½c.

PROVISIONS.—Mess pork, \$3.50 per bbl;
short cut mess, \$3.75; short clear, \$3.75;
compound lard, 4c; family lard, 4½c; ket-
tle lard, 5½c; smoked hams, 9½@10c; bac-
con, 7½@7½c; shoulders, 6½c; picnic hams,
7c; extra mess beef, \$7.25; plate beef, \$7.75.
COFFEE.—City prices are as follows: Rio,
roasting, 15c; fair, 16c; good 18@19c; prime,
20c; choice, 22@23c; fancy, 24c; Maracabo,
roasted, 25c; Santos, roasted, 24c; Mocha,
roasted, 25c; Java, 29c.

HARDWARE.—Wire nails, \$1.55; steel
cut nails, \$1.55 per cwt, new card; axes,
single bit bronze, \$5; double bit, bronze,
\$5.50; single bit solid steel, \$8; double bit,
solid steel, \$9.50 per doz; bar iron, \$1.40;
carriage bolts, 75 per cent off list; tire
bolts, 70 and 10 per cent off list; painted
barb wire, \$1.65; galvanized do, \$1.85 per
cwt; single and double strength glass, 70
per cent off list; sheet iron, No. 24, \$2.50
per cwt; galvanized, 75 and 10 per cent off
list; No 1 annealed wire, \$1.40 rates.

OILS.—Raw linseed, 32c; boiled linseed,
34c per gal, less 1c for cash in ten days;
extra lard oil, 40c; No 1 lard oil, 31c; wa-
ter white kerosene, 4c; fancy grade,
11½c; deodorized stove gasoline, 7½c; tur-
pentine, 32½c per gal in bbl lots; in less
quantities, 33@40c per gal.

HAY.—Best timothy in car lots, \$9.50@
\$10 per ton; rye straw, \$5.25; wheat and
oat straw, \$4.50 per ton.

HIDES.—No 1 green, 6c; No 1 cured, 7c;
No 2 green, 5c; No 2 cured, 6c; No 1 cured
calf, 4c; No 2 cured calf, 5½c; No 1 green
calf, 7c; No 2 green calf, 5½c per lb;
sheepskins, 60@80c each.

WOOL.—Unwashed fine, 11@12c; un-
washed medium, 15@16c; washed fine,
15@16c; washed medium, 18@19c per lb.

DETROIT LIVE STOCK MARKET.

Michigan Central Stock Yards.

Detroit, July 29, 1897.

CATTLE.

Receipts Thursday, 540 head; from
the west direct to butchers, 26; on sale,
514, as compared to 471 one week ago.
There is no change to note in quality.
Trade opened active and prices strong
to shade higher. All sold early, closing
firm; \$4.15 was the highest price paid
for 20 steers av 1,020 lbs, but the bulk
changed hands at prices ranging from
\$2.75 to \$4. Bulls—Light, \$2.50 to \$2.70;
fair to good butchers, \$2.75 to \$3; stockers,
\$3 to \$3.60; feeders, \$3.50 to \$4. Veal calves
—Receipts, 166, one week ago, 163; active
and higher; range, \$5 to \$7.75. Mich Cows
and Springers—Fairly active; range from
\$25 to \$45 each; mostly \$30 to \$40; receipts
mostly common.

Bunnel sold Mich Beef Co 2 feeders av
750 at \$3.70, and 7 mixed butchers to Cap-
lis & Co av 960 at \$3.20.

Robb sold Fitzpatrick 6 fat cows av 930
at \$3.

Glenn sold Sullivan 6 feeders av 855 at
\$3.70, 7 mixed butchers to Caplis & Co av
717 at \$3.50, and 3 cows av 1,046 at \$3.

Oversmith sold Mich Beef Co 7 fat cows
av 1,154 at \$3, 7 mixed butchers av 837 at
\$3.50, and 19 steers av \$13 at \$3.30.

White sold same 13 feeders av 896 at
\$3.70.

Spicer & M sold same 10 steers av 1006 at
\$3.30.

Roe & Holmes sold same 2 stockers av
580 at \$3, and 5 mixed butchers to Black
av 876 at \$3.10.

Dennis sold Mich Beef Co 19 steers av
967 at \$4.

Barber sold same 20 steers av 1,020 at
\$4.15.

Ansty sold Grant 2 bulls av 870 at \$2.50,
2 mixed butchers to Kammien av 675 at
\$3.25, and a cow weighing 1,020 at \$3.

Lomason sold Sullivan a bull weighing
1,160 at \$3, 2 steers to Black av 955 at \$4,
and 3 heifers av 676 at \$3.25.

Clark & Belhimer sold same 6 mixed
butchers av 845 at \$3.25.

Roe & Holmes sold Sullivan 2 bulls av
1,585 at \$3, and 8 fair butcher cows to
Magee av 1,015 at \$2.75.

Granger sold Mich Beef Co 14 mixed
butchers av 733 at \$3.50, 3 cows to Clancy
av 950 at \$2.75, and a canner weighing
1,000 lbs at \$2.00.

Driscoll & P sold Caplis & Co 2 common
butcher cows av 1,015 at \$2.65, 3 mixed
butchers to Black av 626 at \$3.30 and 2
steers to Sullivan av 755 at \$3.30.

Rook sold Mich Beef Co 2 cows (can-
ners) av 965 at \$2.10.

Roe & Holmes sold same a bull weigh-
ing 900 lbs at \$2.50 and 10 stockers av 690
at \$3.40; also 8 mixed butchers to Magee
av 810 at \$2.75.

York sold Mason 22 mixed stockers and
butchers av 667 at \$3.50, 3 cows to Black
av 988 at \$2.75, and 2 common do av 975 at
\$2.25.

Horne & R sold Mich Beef Co 2 fat
heifers av 710 at \$3.75, and 4 bulls av 700 at
\$2.75.

Sweet sold Regan 5 stockers av 508 at
\$3.00.

Roe & Holmes sold Black 5 mixed
butchers av 892 at \$3.50, and 5 stockers to
Sullivan av 640 at \$3.50.

York sold Mich Beef Co 6 sausage bulls
av 1,018 at \$2.75.

Sprague sold Kammien 2 heifers av 735
at \$3.35.

Roe & Holmes sold Sullivan 10 stockers av 661 at \$3.40.
Sprague sold same 4 feeders av 707 at \$3.70, and a coarse butcher steer to Caplin & Co av 1,000 at \$3.40.
Wm Haley sold Mohr 7 mixed butchers av 624 at \$3.40.

Roe & Holmes sold McDonald 6 stockers av 458 at \$3.
Spicer & Merritt sold Regan 11 light mixed butchers av 594 at \$3.10, and 15 stockers to Mich Beef Co av 616 at \$3.30.
Joe McMullen sold same a steer weighing 750 at \$3.80, and 7 mixed butchers av 840 at \$3.

Wm Pinkney sold same 5 feeders av \$70 at \$3.90, and 6 fat cows av 1,088 at \$3.40.
Roe & Holmes sold Mich Beef Co 24 mixed av 775 at \$3.65.
O. L. White sold Schleicher 6 mixed butchers av 658 at \$3.35, and a bull weighing 640 at \$2.60.

Spicer & Merritt sold Mich Beef Co 2 feeders av 975 at \$3.90, a heifer weighing 630 at \$3, 2 fat cows av 1,010 at \$3.40, 3 mixed butchers av 943 at \$3.20, 3 steers av 1,033 at \$3.90, a fat cow weighing 1,550 at \$3.50, 2 cows av 715 at \$2.50, and 2 stockers av 540 at \$3.10.

Hymas & B sold Black 8 fat cows av 1,188 at \$3.65.
Mayer sold Caplin & Co 8 steers and heifers av 1,041 at \$4, 8 mixed butchers av 750 at \$3.50, and 4 cows av 1,042 at \$2.90.
Rook sold same a fat heifer weighing 720 at \$3.50, 2 cows av 1,080 at \$3.

Roe & Holmes sold Fitzpatrick 16 mixed butchers av 733 at \$3.20, 3 do av 843 at \$3.15, and a bull weighing 780 at \$2.50.
Sweet sold Mich Beef Co 5 fair butcher cows av 1,102 at \$2.90.

L. Carman sold Kammen 4 light butchers av 621 at \$3, and a bull weighing 560 at \$2.50.
Sweet sold Sullivan 17 stockers av 540 at \$3.50.

SHEEP AND LAMBS.

Thursday's receipts numbered 1,019; one week ago, 773. Of fair average butcher quality. Market active with sales at about last week's prices. Range of prices: Lambs, \$4.25 to \$5.00; yearlings and good mixed lots, \$4.00 to \$4.65; common to good mixed butchers, \$2.75 to \$4.00.

Horne & R sold Wreford 47 mixed butchers av 86 at \$3.55.
Horne sold Fitzpatrick 38 lambs av 61 at \$5.00, and 9 common butchers av 96 at \$3.00.

Haley sold Hammond, S & Co 53 sheep and lambs av 79 at \$4.00.
Sprague sold Loosemore 12 mixed av 95 at \$3.25.

Granger sold Fitzpatrick 13 mixed av 95 at \$3.00, and 28 lambs av 66 at \$5.00.
Estep sold Mich Beef Co 13 common butchers av 89 at \$3.00.

Roe & Holmes sold Monaghan 50 sheep and lambs av 60 at \$4.50.
York sold Mason, 31 mixed av 82 at \$3.25 and 14 lambs av 50 at \$4.40.

Spicer & M sold Mich Beef Co 19 most lambs av 57 at \$4.00, and 19 mixed butchers av 98 at \$3.50.
Vanbuskirk sold Hammond, S & Co 23 yearlings av 75 at \$4.00.

Ansty sold Fitzpatrick 71 most lambs av 60 at \$4.00.
Carman sold Young 58 most lambs av 71 at \$4.75.

Sharp sold Hammond, S & Co 24 mixed av 97 at \$3.40.
Horne sold Monaghan 33 lambs av 69 at \$4.50, and 7 culls av 63 at \$2.75.

Robb sold Duff 12 common butchers av 76 at \$3.00.
Lomason sold Holmes 17 common butchers av 62 at \$3.00.

Sharp sold same 95 lambs av 65 at \$5.00.
Pinkney sold Hammond, S & Co 26 lambs av 65 at \$4.50.

Glenn sold Young 16 lambs av 64 at \$4.50.
Shelton sold Monaghan 13 mixed butchers av 71 at \$3.40.

Clark & B sold Cook 46 lambs av 63 at \$4.75.
Driscoll & P sold Bussell 17 lambs av 52 at \$4.75.

HOGS.

Receipts Thursday were 3,003; from the west direct to packers, 246; on sale, 2,757; as compared with 1,595 one week ago. Market opened active and 10 to 15c higher, later lost 5 to 7½c, closing quiet and 5 to 7½c higher than last Friday's prices. Range, \$3.65 to \$3.85, bulk at \$3.70 to \$3.80; stages, 1-3 off; rough, \$3.00 to \$3.25; pigs, \$3.55 to \$3.90.

Bunnell sold Parker, Webb & Co 21 av 207 at \$3.75.
Vanbuskirk sold same 103 av 184 at \$3.80.

Sharp sold same 58 av 219 at \$3.70.
Roe & Holmes sold Cox 13 pigs av 101 at \$3.90.

Bartholomew sold Parker, Webb & Co 30 av 190 at \$3.70.
Weeks sold same 66 av 218 at \$3.75.

Emery sold same 64 av 210 at \$3.70.
Granger sold same 14 av 223 at \$3.75.
Micol sold same 31 av 191 at \$3.70.

Osmus sold same 42 av 190 at \$3.75.
Spicer & M sold same 27 av 212 at \$3.75.
Pinkney sold same 66 av 171 at \$3.70.

Wm Haley sold same 31 av 192 at \$3.80.
Ansty sold R S Webb 23 av 171 at \$3.80.
Horne sold same 43 av 194 at \$3.80.

Thorburn sold same 38 av 195 at \$3.75.
Clark & B sold Hammond, S & Co 32 av 232 at \$3.72½.

Lomason sold same 46 av 227 at \$3.72½.
Glenn sold same 22 av 210 at \$3.72½.
Joe McMullen sold same 66 av 194 at \$3.70.

Kalahan sold same 73 av 212 at \$3.72½.
Oversmith sold same 44 av 215 at \$3.70.
Ackley sold same 57 av 247 at \$3.72½.

Roe & Holmes sold Parker, Webb & Co av 202, 52 av 162, and 32 av 160, all at \$3.72½; also 38 av 201 at \$3.65.
Mayer sold Hammond, S & Co 65 av 209 at \$3.75.

Horne & R sold same 32 av 216 and 38 av 196 at \$3.72½.
Sprague sold same 23 av 203 at \$3.70.
Rook sold same 12 av 216 at \$3.70.

Driscoll & P sold same 16 av 185 at \$3.70.
Carrier & R sold same 80 av 196 at \$3.70.
Estep sold same 65 av 205 at \$3.72½.

Patrick & P sold same 57 av 243 at \$3.70.
Shelton sold same 30 av 246 and 74 av 176 at \$3.70.
Brooks & P sold same 67 av 203 at \$3.72½.

Spicer & M sold Parker, Webb & Co 20 av 201 at \$3.75.
O L White sold same 44 av 177 at \$3.75.
Shelton sold same 53 av 187 and 69 av 185 at \$3.72½.

Roe & Holmes sold same 10 av 207 and 30 av 140 at \$3.72½.
Tubbs sold same 10 av 189 at \$3.85.

Olney sold same 77 av 208 at \$3.70.
Butler sold Sullivan 9 av 182 at \$3.70.
Thompson sold same 13 av 187 at \$3.80.
Coats sold same 23 av 136 at \$3.80.
Cox sold R S Webb 12 av 191 at \$3.80.
Fellows sold same 56 av 197 at \$3.80.
Spicer & M sold same 29 av 178 at \$3.80.
Horne sold same 44 av 177 at \$3.80.

Friday, July 30, 1897.
CATTLE.

Receipts Friday, 482 head; through and direct to butchers, 223; on sale, 259; one week ago, 196. Market opened active at about yesterday's prices, but at the close was rather slow and weak; \$4.05 was highest price to-day for 22 steers av 1,108 lbs; canners and common thin butchers, \$2 to \$2.50; balance as noted. Veal calves—Receipts, 65; one week ago, 26; unchanged. Milch cows and springers—Very few here; unchanged.

Leach sold Mich Beef Co 10 steers and heifers av 665 at \$3.60, 5 stockers av 664 at \$3.60 and 4 fair butcher cows av 892 at \$2.75.

Spicer & Merritt sold Dunn 10 stockers av 463 at \$3.10.
Fox & Bishop sold Black 7 mixed butchers av 1,003 at \$3.40.

Roe & Holmes sold Magee 5 common butcher cows av 833 at \$2.50, a bull to Mich Beef Co weighing 930 at \$2.50, 2 thin oves av 1,575 at \$2.75 and 10 stockers av 688 at \$3.40; to Robinson 5 heifers av 625 at \$3.15 and 6 mixed butchers av 905 at \$3.15.

Erwin sold Mich Beef Co 2 feeders av 825 at \$3.75, 2 mixed butchers to Caplin & Co av 845 at \$3.50, a bull weighing 760 at \$2.50 and a cow weighing 550 at \$3.

Spicer & M sold Kammen 5 mixed butchers av 732 at \$3.25, 2 common cows to Magee av 965 at \$2.25, 2 bulls to Caplin & Co av 1,090 at \$2.50 and 4 stockers to Sullivan av 645 at \$3.

O Nicolls sold Fitzpatrick 3 good butcher steers av 960 at \$4, 2 bulls av 910 at \$2.50 and 4 fat cows av 1,050 at \$3.10.

Carman sold Mich Beef Co 7 fat cows av 928 at \$2.90, 10 heifers av 638 at \$3.40 and 2 bulls av 500 at \$2.40.

McLaren sold Kammen 4 mixed butchers av 782 at \$3.10.
Cassey sold Sullivan 23 steers av 1,108 at \$4.05.

Butler sold Mich Beef Co 3 steers av 760 at \$3.35, 2 cows to Caplin & Co av 820 at \$2.50, 2 do av 965 at \$3 and 12 mixed butchers av 825 at \$3.35.

Younger & M sold Mich Beef Co 3 bulls av 786 at \$2.40, 8 stockers av 553 at \$3.25 and 2 oxen av 1,665 at \$3.40; 4 stockers to Sulley av 400 at \$2.90 and 8 mixed butchers to Marx av 628 at \$3.25.

Roe & Holmes sold Robinson 11 steers and heifers av 777 at \$3.75, 2 bulls av 1,200 at \$2.75 and a fat cow weighing 1,050 at \$3.25.

Lovewell sold Sullivan 4 steers av 770 at \$3.60, 11 mixed butchers to Fitzpatrick av 793 at \$3.50 and 2 cows av 1,350 at \$3.

O'Connor sold Sullivan 15 steers and heifers av 732 at \$3.80.

SHEEP AND LAMBS.

There is no change to note in the sheep market; only 51 on sale; one week ago 98. The few here sold as follows:

Butler sold Mich Beef Co 12 sheep and lambs av 85 at \$4.50 and 3 fat butchers av 177 at \$3.00.

Carman sold Mich Beef Co 19 mixed butchers av 97 at \$3.50.

HOGS.

Receipts Friday, 1,407; direct to packers, 116; on sale, 1,291. Market active and 5 to 7½c higher, and 10 to 12½c higher than prices paid last Friday; closing firm.

Kring sold Hammond, S & Co 52 av 225 at \$3.70.
Eddy sold same 66 av 219 at \$3.75.

Erwin sold same 48 av 186 at \$3.80.
Parsons & H sold same 92 av 191 at \$3.80.

Roe & Holmes sold same 75 av 221, 80 av 196, 9 av 165, 39 av 177, 68 av 196 and 32 av 183, all at \$3.80.

Leach sold Parker, Webb & Co 19 av 200 at \$3.72½.
McLaughry sold same 26 av 176 at \$3.80.

Lucke sold same 67 av 194 at \$3.82½.
E O Knapp sold same 66 av 185 at \$3.80.
L Carman sold same 34 av 171 at \$3.72½.

Dicke sold same 50 av 280 at \$3.65.
M Carman sold same 83 av 216 at \$3.75.
Stage & Cassey sold R S Webb 6 av 147 at \$3.75.

Vickery sold same 14 av 233 at \$3.75.
Lovewell sold same 25 av 170 at \$3.75.

OUR BUFFALO LETTER.

East Buffalo, July 29, 1897.

Cattle.—Receipts of cattle on Monday last were 5,022, as compared with 5,720 the same day the previous week, and shipments were 4,152, as compared with 4,665 for the same day the previous week.

The market opened strong on Monday at an advance of 10¢ to 15¢ on all kinds, common stock and cows and heifers showing the most strength. The general quality of the receipts was good, but there was a scarcity of really choice steers.

Stockers and feeders were also firm and active, with smooth lots 10¢ to 15¢ higher. Since Monday the market has held steady; receipts have been light, and the feeling is one of firmness. Quotations on Wednesday were as follows: Export and Shipping Steers.—Prime to extra choice finished steers, 1,250 to 1,400 lbs, \$4.85 to \$4.90; prime to choice steers, 1,200 to 1,400 lbs, \$4.70 to \$4.75; good to choice fat steers, 1,200 to 1,400 lbs, \$4.60 to \$4.75; good to choice fat smooth steers, 1,100 to 1,200 lbs, \$4.40 to \$4.50; green, coarse and rough fat steers, 1,000 to 1,350 lbs, \$3.75 to \$4.35. Butchers' native cattle.—Fat smooth dry fed steers, 1,050 to 1,150 lbs, \$4.30 to \$4.40; fat smooth dry fed light steers, 900 to 1,000 lbs, \$4.10 to \$4.25; green steers, thin to half fattened, 1,000 to 1,400 lbs, \$3.55 to \$4.00; fair to good steers, 900 to 1,000 lbs, \$3.65 to \$4.10; choice smooth fat heifers, \$4.10 to \$4.50; fair to good fat heifers, \$3.60 to \$4.00; good smooth well fattened butcher cows, \$3.50 to \$3.90; fair to good butcher cows, \$3.30 to \$3.40; common old cows, \$2.50 to \$3.00; common to fair lots, mixed cows, heifers, and thin steers, half fattened, \$2.40 to \$3.40. Stockers, feeders, bulls and oxen.—Feeding steers, good style, weight and quality, \$3.65 to \$4.00; feeding steers, common to only fair, \$3.40 to \$3.60; good quality yearling stock steers, \$3.75 to \$4.00; stock heifers, common to choice, \$2.90 to \$3.25; export weight bulls, fat and smooth,

\$3.40 to \$3.75; good fat smooth butchers' bulls, \$3.15 to \$3.40; fair to good sausage bulls, \$2.85 to \$3.25; thin old and common bulls, \$2.25 to \$2.75; stock bulls, \$2.50 to \$3.00; fat smooth young oxen, to good lots fit for export, \$4.40 to \$4.80; fair to fairly good partly fattened young oxen, \$3.60 to \$3.90; old common and poor oxen, \$2.25 to \$3.50. Milch cows.—Milkers, strictly fancy, \$3.30 to \$3.45; milkers, good to choice, \$2.40 to \$3.00; poor to fair, \$1.85 to \$2.00; strictly fancy, \$2.35 to \$2.50; springers, fair to good quality, \$2.35 to \$2.50; common milkers and springers, \$1.40 to \$2.00. Veal calves.—Veals, prime to extra, \$5.25 to \$6.50; veals, good to choice, \$4.75 to \$5.00; veal calves, common to fair, \$4.45 to \$4.50; heavy fed and buttermilk calves, as to quality, \$2.50 to \$3.75.

Cattle ruled steady to strong on Thursday, with no change in values.

Sheep and Lambs.—Receipts Monday were 9,600, as compared with 12,400 the previous Monday; shipments were 6,800, as compared with 9,600 same day the previous week. The market on Monday ruled dull and lower on lambs, and about steady with the close of the week on sheep and yearlings, not enough of the latter being offered to meet the demand.

All classes were lower than the previous Monday, and the market closed dull and easy. Since Monday receipts have been so light that prices have held steady in the face of unfavorable reports from both eastern and western points. Quotations at the close on Wednesday were as follows: Native Yearling Lambs.—Fancy handy selections, \$4.40 to \$4.60; good to choice, \$4.10 to \$4.25; fair to good 65 to 70 lbs., \$3.65 to \$4.00; common to good culls, \$3.00 to \$3.50; export yearlings 65 to 110 lbs, \$4.00 to \$4.25; Spring Lambs.—Good to prime, \$4.55 to \$4.80; fair to good, \$4.50 to \$4.75; culls and common, \$3.75 to \$4.40. Native Clipped Sheep.—Prime to fancy wethers, \$4.15 to \$4.25; good to choice handy sheep, \$3.75 to \$4.10; common to fair, \$3.25 to \$3.50; culls and common, \$2.25 to \$3.25; good to extra heavy export clipped mixed sheep to prime wethers quotable, \$3.75 to \$4.40.

Sheep and lambs ruled steady to strong and higher Thursday. Quotations were as follows: Choice lambs \$5.25 to \$5.35; fair, \$5; sheep, all wethers, \$4.25 to \$4.50; mixed, \$3.75 to \$4; culls, \$3.35 to \$3.25.

Hogs.—Receipts of hogs on Monday last were 22,040, as compared with 26,250 for the same day the previous week; and shipments were 18,620, as compared with 18,900 for the same day the previous week. The market opened active at an advance of 5¢ to 10¢ as compared with the close of the week, and closed up with a firm tone and a good clearance of stock on sale. Prices were about the same as the previous week, but rather lower than on Thursday last. The top price for light Yorkers was \$4.10, and for heavy hogs \$3.80. Since Monday the market has advanced, and is now at the highest point reached in months. The close on Wednesday, however, was rather weak at the following range: Good to choice light medium grades 165 to 180 lbs., \$4.25; good to choice pigs and light yorkers, 125 to 150 lbs., \$4.25; mixed packing grades, 185 to 200 lbs., \$4.10; fair to best medium weight, 210 to 260 lbs., \$4.00; good to prime heavy hogs of 270 to 300 lbs, \$3.90 to \$4.00; rough common to good, \$3.20 to \$3.40; stags common to good, \$2.55 to \$3.00; pigs light, 105 to 120 lbs, good to prime corn fed lots, \$4.25; pigs thin to fair, light weight of 70 to 100 lbs, \$4.00 to \$4.05; pigs, skips and common light and undesirable lots, \$3.50 to \$3.75.

Hogs were weak and 10¢ lower on Thursday, closing steady at the decline. Light sold at \$4.10 to \$4.15; mixed, \$3.90 to \$3.95; heavy, \$3.80 to \$3.90. All offered were sold.

CHICAGO.

Union Stock Yards, July 29, 1897.

Cattle.—Receipts for last week were 46,989 head, as compared with 49,810 the previous week, and 53,444 for the corresponding week in 1896. Business opened active on Monday, with values about on a level with those prevailing the same day last week, but 10¢ to 15¢ higher on good steer cattle than at the close of the week. Up to and including Wednesday of this week receipts have been 34,845, as compared with 34,686 for the same days last week. Since Monday prices have dropped about 5¢ to 10¢ on cattle of medium quality showing grass, and are a shade lower on all classes. Fancy steers sold Wednesday at a range of \$4.80 to \$5.00; good to choice, \$4.60 to \$4.75; and common thin to fair good weight steers at \$3.90 to \$4.55; cows ranged from \$2.40 to \$4.10; heifers, \$2.90 to \$4.40; bulls, \$2.50 to \$3.90; veal calves, \$4.00 per hundred, and steady.

On Thursday receipts of cattle were 9,500. Market closed steady and unchanged at Wednesday's prices.

Sheep and Lambs.—Receipts last week were 66,255, as compared with 73,655 for the previous week, and 67,347 for the corresponding week in 1896. The market opened active and higher on Monday, prices showing an advance of 15¢ to 25¢ per hundred over the close of the week. Native culls and old ewes sold at \$3.75 to \$4.00; native clipped lambs and yearlings, \$4.10 to \$4.75; prime spring lambs, \$5.10 to \$5.40, and cull spring lambs, \$5.10 to \$5.40. Up to and including Wednesday this week, receipts have been 38,759, as compared with 42,447 for the same days last week. The range of prices on Wednesday were about level with those of Monday where higher it was because of the better quality of the stock. Grass western sheep sold at \$3.65 to \$3.80, and western yearlings up to \$4; native sheep sold generally at \$3.75 to \$4.00, and lambs \$3.75 to \$4.00, bulk around \$5.15 to \$5.25 for the more desirable grades.

Receipts of sheep on Thursday were 15,000 head. Market ruled steady but rather weak.

Hogs.—The receipts of hogs last week were 144,051, as compared with 140,816 the previous week, and 119,858 for the corresponding week in 1896. Up to and including Wednesday of this week, receipts have been 71,535, as compared with 64,388, an increase of 7,000 head. The market on Monday opened active and higher by 6¢ than at the close of the week; \$3.82½ was the top price for light, \$3.60 for medium and \$3.75 for prime heavy and butchers' weight. Since Monday there has been some decline in prices. Wednesday prime light hogs ranged from \$3.75 to \$3.82½, the latter for closely sorted lots of best quality; prime shipping and heavy butcher's hogs, \$3.60 to \$3.70; prime packing, \$3.40 to \$3.55; prime heavy, \$3.55 to \$3.65, and

mixed heavy, \$3.50 to \$3.65. The market closed steady.

Receipts of hogs on Thursday were 25,000. The market ruled strong to a shade higher. Light sold at \$3.60 to \$3.85; mixed, \$3.57½ to \$3.75; heavy, \$3.37½ to \$3.75; rough, \$3.37½ to \$3.45.

Sea Shore Excursion via Michigan Central.

On August 5th, Special Excursions will be run by the Michigan Central via their famous White Mountain Route to Portland and return. Eleven Dollars for the round trip from Detroit. Correspondingly low rates from other Michigan stations.

Special Attractions for D. G. R. & W. R. R. Excursionists.

Sunday, August 1st, at Island Lake and Grand Lodge, Spiritualist Camp Meetings; at Lansing, Colored people's Camp Meeting. An extra attraction at Grand Lodge will be the Newboys Band of Detroit, which will play at various stations along the road, and during the day on 7 islands. Don't miss going on the excursion on above date. GEO. DEHAVEN, G. P. A.

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For the Michigan Farmer.

HARVESTING RASPBERRIES.

At present we are gathering our red and black raspberries and we find from the yield we are getting, where we properly and improperly cared for them.

A raspberry of either kind will respond to good culture as readily as any fruit that grows and will show neglect as quick.

As we were short of help last season, and as plants of all kinds made a wonderful growth, the weeds gained a start on us, besides the new canes grew so rapidly that they were three to four feet high before we cut them back.

Some of the canes were badly broken over by the winds before they were cut back and these never fully recovered. It had always been customary with us to trim out and burn the old canes as soon as they were through bearing so as to destroy all injurious insects which may be secreted in them, besides lessening the danger of fungous diseases, but for lack of time we failed to do so last year, and the results are that our bearing canes are more injured this year by the tree cricket and the red-necked argulus than ever before.

Our new canes, which are bearing their first crop, show the effect of proper care which they received last year; the fruit is nearly a third larger and much more juicy than on the old canes.

The difference in cutting back early or waiting till the canes are two or four feet high is quite manifest. The canes which were cut back when only 18 to 20 inches high, support their fruit better and have more of it than where they grew so high.

I grow only two varieties of this fruit, the Cuthbert for red, and Gregg for blackcap. What other varieties I have grown never have paid me as well as these; they are not as early as some varieties, but they are hardier, greater bearers, and less subject to disease than any I have ever grown or seen grown.

I think the kind of soil has much to do with the variety we should grow many times. A grower with whom I talked lately said, that the Hansell was the only red variety which would stand the winters at his home, and that the Ohio was the best blackcap.

I think every one who intends to raise this fruit in large quantities should try a few of the most promising varieties and test them; those which succeed the best, plant most extensively.

There are nearly as many different varieties of raspberries as there are of strawberries, though many are only old varieties named over.

If any one wishes to learn of the different varieties, he ought to write for bulletin No. 111 of our state experimental station and read it carefully.

B. A. WOOD.

Kalamazoo Co., Mich.

For The Michigan Farmer.

PLANT FOOD.

"How does she do it?" is asked when a window is seen in winter with plants in bloom or the whole side of a house covered by a vine, while in another house there may be two or three leggy-looking plants or a few spindling stems of a vine, and the answer of the successful woman generally is, "Plenty of plant food administered judiciously." If you want an Ampelopsis Vietchi to cover the sides of the house, and reach the roof, every spring dig in plenty of well-rotted manure and water plentifully. Have you ever noticed this interesting vine? How it throws out tiny fingers that clasp the little roughnesses in the wall and what a lovely green it is, changing to crimson in the fall. The lawn, too, should have a top dressing of manure early in the spring, though very good results may be obtained by sifting wood ashes over it. This same ashes is good, put around quince trees. It is a lucky plant raiser that lives in the suburbs and can get the soil just under the freshly removed sod, soft and fine and smelling sweeter to a flower lover than the best cologne. This is the best thing in the world to plant the seeds in, and a bushel basket of it ought to be placed in the shed for the pot plants or for use in early spring. These same pot plants ought to have something to eat, too. Many windows are full of consumptive looking things

just because the lady of the house neglects them, and thinks they can get along all winter on the soil, often poor, that they were put in last fall. Bone dust is cheap, and can be bought of the florists, or at the seed stores, and mixed in the soil, or put in the watering pitcher, will make a vast improvement in the plants. Remember, a plant breathes through its leaves, and these must be kept free from dust. The best thing is a plant syringe that will send a fine spray under, and over. Palms don't like to be disturbed by repotting, but can be enriched by digging out the top soil and putting in bone dust.

ANNA LYMAN.

PLUM GROWING IN OCEANA COUNTY.

The first thing that brought Oceana county into prominence as a fruit district was the display of plums made by its fruit-growers about 20 years ago at state and district fairs. The curculio was unknown there, the fruit-growers active and intelligent, and Oceana plums became known in the big markets of the country as of the highest class. A good many of the men, who were active in developing the fruit interests of the county, have since passed away. But one of these veterans, then a young man, is still an enthusiastic cultivator of the plum, and he recently furnished a paper on the subject, summarizing the results of his long experience, which we think many of our readers will find interesting as well as valuable:

In cultivating and growing the plum for general market, there is yet a possibility of making it a profitable business, providing certain rules and conditions are carried out.

First in order to success is to have or select a good all-purpose soil. I prefer a heavy, sandy loam with a clay subsoil, if such soil is convenient to have, and, if not, any sandy or clay soil will grow plums. If on sandy soil and quite light, fertilize well, and always plant trees on such soil of the varieties that succeed on peach root.

Select choice, No. 1 stock—strong one-year-old if on peach root, and two years old if on plum root—for planting. Cut off the ends of all large and broken roots, so as to have a clean cut at the end of each root before setting the trees. Head in the top from half to two-thirds of its growth; plant with care, setting trees from eight to twenty feet apart; cultivate and take the best of care each year thereafter, give the young trees an annual pruning, cutting in from one-third to one-half of the past season's growth of wood each spring until the orchard comes into full bearing. The orchard requires thorough pruning, such as heading in long, straggling growth, thinning out crowded tops and limbs that cross each other.

And unless one has a stiff clay, or moist and cold, location for his orchard, I would always select and plant all varieties that can be grown on peach root, for the simple reason that the trees are just as long-lived and even longer, sometimes, than on plum roots. Young orchards on the peach are much the finer foliage, and will carry their heavy crops of fruit, in case of a drought, much better than on the plum root. There is an objection to having the plum on peach root by many growers on account of the borers, but this is all nonsense, as more trees are killed each year by the borers on the plum root than on the peach with us in Oceana county.

In setting your trees on peach, plant them a little deeper, in order to have the union near the top of the ground, and, furthermore, you never will be troubled with plum sprouts coming up all over your orchard like some varieties do. I have taken out and killed more peach-borers from the Lombard variety on plum root, which had many sprouts cut off at or near the trunk, than I have ever found on all other varieties on the peach during all my past experience of growing plums; and I actually believe a large majority of our bearing plum trees, which die annually, are so injured and partly killed by the borers, and with such heavy crops of fruit, that the loss of such trees is largely due to the borers. One or two borers in a plum root will kill the tree, while, on the peach, it will injure it somewhat, but the tree will soon recover and go on growing as if nothing had ever happened to the trees. This has come under my observation a number of times, and I know it to be a fact.

So, in conclusion, I say, plant your plum orchards with trees budded on the peach root. After the orchard comes into full bearing, say from four to six years from the time of setting the trees, look after the curculio; keep off and destroy all rotten and decayed fruit as much as possible. And the most important duty of all is to never let your trees overbear; thin the fruit off, so that you will not have to prop the limbs up to prevent them from breaking down, as well as to save the life of your trees. Many trees die annually from lack of vitality and overbearing several years in succession.

The plum is grown and succeeds over a wide territory, and the abundant crops and low prices for its fruit all over the country during the past several seasons, make it rather one of the unprofitable lines of fruitgrowing of recent years. But there is yet a possibility of growing the plum for general market at a good, fair profit if the right varieties are selected and proper care is given the business.

But you will all enquire what to plant, and the majority of growers would say, plant Lombard, Reine Claude, and Blue Damsion, and why? Because they are general-market and all-purpose plums. These varieties will bear great crops of fruit and will succeed for nearly every one who plants them, making lots of cheap plums on the market, of course, at a certain time.

But I would advise not to plant those common and all-purpose varieties at the present day if the money or profit in the business is your object. During the past season of 1896, with such low prices on nearly all choice fruits I had the pleasure and reward of selling all my large, fancy, blue plums at a good, fair profit, at from \$1.25 to \$1.75 per bushel, net. I would now select and plant only the large, dark, or blue varieties, with the exception of two varieties, and those would be Burlank and Coe's Golden Drop. I certainly would select and plant these two for their fine size and color, as well as for great productiveness of the trees. Both these varieties are of the most excellent quality and the finest canning plums. I sincerely believe that the canners and consumers of our plums will soon look after quality more than the fine appearance of the fruit.

Next, I would select such as Field, Guei, Hudson Egg, Felleberg Prune, Monarch, and Grand Duke. There are other choice and profitable varieties, but the above are sufficient to cover the whole season of fruiting time.

And, again, in conclusion, allow me to say that if the preceding suggestions are carried out to the letter and put in thorough practice, there is yet a possibility of a good profit and rich reward in store for the practical plum-grower in future years.

RECOGNIZED TYPES OF THE PEACH AND ITS IMPROVEMENT.

Last winter, at a meeting of the Kentucky State Horticultural Society, W. M. Samuels read a paper on new peaches and their merits. In the paper he spoke of the various types into which the peach is divided, and referred to the improvements of the fruit by cross-fertilization. He said there was yet a great work to be done in this direction in the future, and continued:

Rivers, of England, is almost the only man in the world who has attempted to improve the peach by cross-fertilization, and on account of unfavorable conditions of climate, his Early Rivers, Rivers' Late, Silver Medal, etc., do not equal many of our chance seedlings. Horticulturists of the United States have expended much time and labor in improving the apple, pear, plum, grape, strawberry, raspberry and blackberry by crossing varieties, but seem to have neglected the peach, the most luscious and, with one exception, the most universally used of all fruits.

They have depended upon nature's method of wafting upon the breeze the pollen until it found lodgment on the stigma of some neighboring blossom, or fertilization has taken place through the agency of insects carrying pollen from one flower to another. The chances of securing a valuable variety in this process are one in many thousand; but the excellent peaches produced by these natural methods lead us to believe that systematic plans of crossing would result in securing superior quality, large size, beautiful color and other attributes that make a first-class fruit.

I have wondered why Luther Burbank, who has done so much to improve other fruits, should not have turned his attention to the peach. I believe both fortune and fame awaits the patient young man who will study this excellent species and combine valuable qualities by systematic cross-fertilization. Yet new fruits have caused so much disappointment, even when introduced by originators, or discoverers, who were thoroughly honest and believed in their superior merit, that I am of the opinion that none of them should be offered to the public until well tested in many different soils and climates, and in seasons varying from the driest to those with the greatest humidity.

Some years ago a peach tree was discovered growing back of a tobaccoist's store, where ashes and tobacco refuse were thrown. The existing conditions were so well suited that the tree produced the finest fruit that had ever been seen in the village, and the specimens sold for 25 cents each. A neighboring nurseryman thought he had found a bonanza, and hastened to buy the tree at a high price, removed it to his own grounds, and budded largely from it. Neither the original tree nor buds ever afterwards produced fruit worth growing. This hasty conclusion of the nurseryman caused him a serious loss, for he destroyed many thousand trees and returned the money to those who had bought, besides giving them other trees.

Pomologists are arranging peaches in various groups, as fast as they discover their type characteristics, and most of the known varieties are now placed in one or the other of three groups, as they are found to resemble each other in manner of growth, form of fruit, or some characteristic common to all. The Persian type or group includes nearly all the old sorts, and their derivatives grown in this country, Europe and Western Asia; as examples, Alexander, Foster, Mountain Rose, etc. The Northern Chinese group being mostly seedlings of the Chinese Cling, and varieties crossed with it, are represented by the Sneed, Thurber, Elberta and General Lee; and the Southern Chinese group, or flat peach, whose most distinctive representative is the Peen-to, grown principally in Florida and along the Gulf coast.

Some nurserymen claim there are numerous seedlings which have long grown in the South that are distinctive enough to put in a separate group, which they designate the Spanish type. I think these will find place in one of the above groups, when the present tendency of amplifying them is changed to a desire to properly restrict the groups. The Chinese Dwarf, Japanese Blood and Red Ceylon have characteristics peculiar to themselves, and have not, therefore, been classed with any group.

SPREAD OF THE SAN JOSE SCALE.

In his remarks on the San Jose scale before the American Association of Nurserymen, Prof. Wm. B. Alwood, of Virginia, spoke of the rapidity with which it was spreading over the country. On this point he said:

"At the present time, from my own record, I know that nineteen states on the Atlantic and adjacent states inland are infested with the San Jose scale. How the scale came into the eastern part of the United States it is not necessary to go into now, except to say that it came on nursery stock from California, and for five or six years it was spreading upon the eastern half of this continent in the nurseries and orchards before we had the first inkling that there was a San Jose scale this side of California except in our cabinets. It is now four years since the first case was known and it is only during the last eighteen months that we have fully begun to realize the extent of the dissemination of the San Jose scale in the East. I may say further that it is only within the last few weeks that we have had brought to our attention some of those alarming cases where the scale has existed right under the nose of specialists for years without having been detected. Now these cases which I shall cite are all arguments for the necessity of most thorough inspection laws, so that we shall be able, by the facts brought out by inspection, to provide such measures, whatever they may be, as will stop the further dissemination of this scale as it has been heretofore widely disseminated."

HEALTHY PEACH TREES.

At the late meeting of the West Michigan Horticultural Society, Mr. A. L. Hamilton told how they might be secured, and here is what he said:

Healthy peach trees are grown on good, well-drained soil, properly located, from healthy seed and buds.

Healthy peach seed may be obtained from Michigan orchards, if care is taken in selecting and gathering it, but I consider it safer and better in every way to use Southern seed that is grown in the mountainous portions of Tennessee, where the natural peach trees grow wild and may be seen, so G. W. Bright, of Green county, that state, writes me, in full vigor at 50 or more years of age. Healthy buds are as necessary in growing healthy trees as is healthy seed; therefore, great care should be taken in selecting the buds with which to start the nursery.

If, to get a start, buds have to be taken, as is frequently the case, from bearing orchards, where yellows and other peach tree diseases prevail, or where San Jose scale may exist, it is best and safest to cut from such orchards only enough buds to give a start of the variety it is desired to propagate, and these should be cut from the tree that is healthiest and, in every respect, best in the orchard of the variety wanted. The tree then should be carefully watched the rest of the season, and, if disease or scale appears, the stock budded from it should be dug out and destroyed; but if the tree remained healthy and all right, the stock grown from it would be healthy, besides being the best strain of that variety, and would be a safer and much more desirable stock to propagate from than would orchard trees which, although apparently healthy at the time, might develop disease the next day or two after the buds were taken from them.

The practice, therefore, of budding whole nurseries on a large scale direct from orchards that may at any time develop more or less disease is, in my opinion, a bad one, and should be discontinued. In the State of Connecticut, where, I understand, the nurserymen, under the command of Mr. Hale, I suppose, bud largely from the bearing orchards, yellows is on the increase.

A prominent member of the State Board of Agriculture of that state wrote me last spring, when ordering 400 or 500 peach trees for his own planting, that such was the case; that the people were becoming discouraged; he feared the legislature would repeal the state yellows law, and he attributed much of the increase of disease to the practice of budding so largely from partially diseased orchard trees.

HORTICULTURAL NOTES.

It was stated at the meeting of the American Association of Nurserymen that the San Jose scale had been found within a few steps of the door of the Horticultural building of Cornell University, and had existed there for three years before its presence was detected. This is very like the astute criminal who made his hiding place close to a police station as one not likely to be suspected.

Mr. J. S. Johnson, a reader of The Farmer, sends the following: "I see by The Farmer that R. F. Child wants a recipe for extermination of horse-radish, so I will give mine: My yard got so seeded with it little else grew in it, so I turned my sheep in and pastured them through the summer, commencing in the spring, and this summer I have to go to the neighbors to get what we want for table use. My sheep are fine wools; don't know as the coarse will do as well or not, but would advise the trial.

The Iowa Experiment Station recommends two methods for trapping cut-worms. One of these consists in walking over the field and thrusting a pointed stick two or three times in the ground near the plants. The worms in their wanderings will fall into these holes, and, as it takes them some time to get out again, if the next morning the same stick is thrust into the hole large numbers will be destroyed. Dr. Oemler kills off the worms before the crop is planted. He takes cabbage leaves or, in the absence of these, bunches of green clover. These traps are moistened and dusted with a mixture of one part of paris green to twenty parts of flour. The traps are then placed in the field ten to fifteen feet apart each way. The doctor says that two such applications, especially

in cloudy weather, at intervals of two or three days, will suffice to allow the worms to make away with themselves, which they generally do with great success.

The Poultry Yard.

POULTRY AT THE COUNTY FAIR AND OTHER MATTERS.

In a recent issue of The Farmer one of your correspondents commented severely on the thoroughbred as wanting in utility, or, in other words, being bred for "show points" rather than practical worth. The writer regrets very much to have to admit that there is good ground for this charge, and we are also, comparatively speaking, pleased to say that this is confined to a comparatively few men who come under the head of "fanciers."

Fancy and utility should and ought to be one. No matter how far up a bird is in fancy points it ought to be equally so in its practicability. And in the hands of an intelligent breeder there is no reason why they cannot be. While it is difficult to see how this is to be attained, yet the writer would be pleased to see matters so changed that high scores are an evidence of highly developed utility as well as merely lacking so many points of equaling a delineated picture representing the ideal feathering of an ideal specimen.

We are again approaching the season for the fall fairs. It is to be regretted that every fair association can not see its way clear to go to a little extra expense and employ a competent judge of poultry to place the ribbons. The idea of "committee judging" in the poultry department in ninety-nine cases out of a hundred is sheer nonsense. It is so extremely nonsensical that it is practically safe to say that it cannot be done with anything like justice to the association or to the exhibitors. Consider for a moment just how logical it is. Three farmers, who just as likely as not don't think of "blooded chickens," from one year's end to another, chosen by a superintendent, who, in about 90 per cent of the cases cares just about as much about "hens" as the judges called upon to place the awards on anywhere from forty to ninety varieties, when, if the truth be known, they could not correctly name a dozen different "kinds." Extremely reasonable isn't it? Yet your humble correspondent has had the pleasure of experiencing just such instances.

One of the stumbling blocks in the way is the expense. It is a little hard for the average fair official to put down five, ten or fifteen dollars for a judge, when a committee picked up here and there will do it for what honor there is in it. A good, competent judge, who understands what he is about, and is instructed to abide by the "standard of perfection," can more than save his fee by throwing out disqualified birds, which are not entitled to prize money in any respectable show, and by withholding prizes where they are not merited.

Another feature connected with the average county fair that needs improvement is the superintendent. Why not put in a man who has at least a passing interest in poultry? What is the harm if that man is an exhibitor? Generally the office is given to some one who doesn't care a snap of the finger for poultry and the result is things in this department go about as they please.

To illustrate our meaning the writer will draw a practical illustration. At a fair held in central Michigan not more than fifty years ago, the superintendent of the poultry department was a butcher. He had been chosen because he was a butcher and bought "oceans of poultry." Of course this qualified him for the position. About the third day of the fair he began to look for his judges. He couldn't find the regular committee, so he proceeded to hunt some up.

First he tried to get men whom he thought reasonably qualified for the position. Later the only qualification was would they do it? The reader doesn't need a fertile imagination to know the logical consequence. It wasn't the fault of the superintendent. Under the circumstances he doubtless did what he could. The trouble was with the association that elected a

man having no interest in the department.

No man will take a department at the county fair and do it justice unless he is somewhat interested in it. The poultry department is no exception to the rule. The man put in charge of this department should be one who cares enough about his duties to be on hand when the exhibits come in, and see that they are properly disposed of. The superintendent should see that every breed and variety is placed by itself, so that if any one desires to see the Brahmas or any other breed he can see them without searching the whole building to find the different coops. We have known cases at a county fair where a half dozen exhibits were in as many different places. In such an arrangement there is very little satisfaction to the exhibitors, less to the visitors, and if possible still less to the judge.

Obviously, all this means work. To be sure it does. But what is a superintendent for? If his position is merely a figure-head, then it had better be dropped entirely. To fill this position is no child's play, and it will take a man with his wits about him to have everything move off smoothly.

The Polish, while a fowl of beauty, is not a farm fowl in any sense of the word. They are strictly a fancier's pet. Their heavy crests render them very easy for hawks, besides being decidedly against their usefulness during cold, stormy weather. This is also true of the Houdan, although the latter is one of the finest layers and table fowls. The fowl with a "top-knot" as well as one with feathered legs, has little use on the farm, although we prefer the latter to the former.

C. P. REYNOLDS.

Shlawassee County, Mich.

For The Michigan Farmer.

AN EXPLANATION REQUESTED.

While looking over the July 17 number of The Farmer I saw an article written by C. P. Reynolds, in which he states that the Black Minorca is the most practical breed of fowls we have when placed under proper conditions. Now last winter, if I am not very much mistaken, this same Mr. Reynolds wrote in The Farmer that the Black Minorca is not nor never will be a practical fowl. I would like to ask Mr. Reynolds through The Farmer his reason for changing his mind. Has he had no practical experience but writes wholly from theory or simply to get a column full? Now I think a person should know something about what he is writing. Supposing a person wishing to start in the poultry industry happens to read Mr. R.'s former article, he may discard the Black Minorcas for some other breed; then reading this later one, in which the writer changes his mind, we would hardly know what to do, or whether the Minorca was a good breed or not. Now it is my experience that almost any breed is good, if placed under proper conditions, and I have bred eight or ten different varieties, which I will not attempt to name in this article. To be sure a fowl with yellow shanks or legs dresses nicer and brings a better price in the market, but my own personal choice would be the Barred, or White Plymouth Rock for all-around breed, and then the White or Black Minorca.

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NOTES ON BREEDING.

Both white and blue are bad colors to mix, and should be left alone if possible, although sometimes, to strengthen the blue a cross to black is advisable, therefrom getting a checker which, if bred black to blue, produces a beautiful blue.

The first thing to consider, however, is the health of birds intended to be mated. None that have had any serious ailment, and none that are known to breed sickly or deformed young, should be mated under any circumstances.

As to mating up for fancy points, it is very seldom a fancier has two alike

in this respect and here is where the greatest care must be taken and his skill and experience brought into account or the result will be disappointment.

Take for instance a fantail; you have them small and large in body; you have scoop tails and big spread tails; you have tails with weak centers and tails slightly wry—and all must be mated some way.

The same number of faults can be found in nearly all varieties, only of course in different shapes according to the variety and the desire of the fancier is as much as possible to overcome these faults by judicious mating.

Never mate two birds in which the same fault shows to any extent, but mate a bird weak in any section to one strong in the same and the result will be nearly always improvement.

Once in awhile a pair is found which are not inclined to mate well; they seem naturally opposed to each other. In such cases they should be cooped in a dark partition, so they can hear each other without seeing; in a few days try putting them together again and if not inclined to fight any more leave them together about a week, and then turn them out and they will generally stay mated all right.—Western Poultry Breeder.

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AGRICULTURAL EDUCATION NOT A SUCCESS.

Well, really, would you publish anything not a stock in trade puff of the Agricultural College? Now, as a representative of the great mass of successful farmers in the State, I offer a few criticisms that they probably will agree with, but do not wish to incur the odium of the literary cult of farmers who know better than practice what they preach; or, if they do attempt their high ideal, are running behind these critical times. Yet I would not wish to say one word against the College to train farmers' sons for an ideal state of farming, if we could govern prices by rings or associated effort, like undertakers, doctors, lawyers, trustees and combines. Nearly all the rest of the world's children are sent to institutions of learning by the hundred thousands, and plenty of money to do it all, because there are yet enormous profits in very many kinds of business where they can crowd out their competitors, and many fine salaries these hard times not reduced at all. But where is the farmer? He has to compete with the whole world, including the most ignorant rabble of heathen. Where is the farmer who can pay for skilled or college educated labor? At a farmers' institute in New York state a speaker asked those to raise their hands who could send their sons to the Cornell University; but three or four responded. Now, right here, I wish to present a great vital fact against college farming. We do not need it at all for the highest efficiency in farming, because in the very nature of things we don't deal with book learning in farming. The lawyer, doctor or minister makes constant reference to printed matter, whereas the farmer does not. Who has not often seen the best paying farms, and finest improved, managed by very illiterate men? I know plenty of such men who are making improvements and money right along these times. I wish sometimes the College would send a professor to learn something from them; but, alas! it might not seem very nice to tell the truth always. There is a bad moral precedent in having the College supported by the State, considering the reforms we wish instituted as regards the university educating doctors and lawyers for their own private advantage. They say: "Why the farmers are being educated in the same manner," whereas not one farmer in 10,000 is educated by the State.

Ex-Gov. Luce joins also in extolling college educated farmers. Now, as it is published all over the State that his fine farm is not self-supporting, is he consistent in wanting to educate more for a business that education or astuteness fails to make profitable? Will his honor please explain this seeming anomaly? There are grave problems confronting us farmers at the present time. We want more light as to what to do. We should all be glad to hear from the Governor. Is it best to farm ones self, or let it for rent or on shares? I have a farm let on the share system, and another one I work myself, and will give as fair a statement as I can to The Farmer at the end of the year, of profit or loss on each.

HENRY VOORHEES.
Grand Traverse County.

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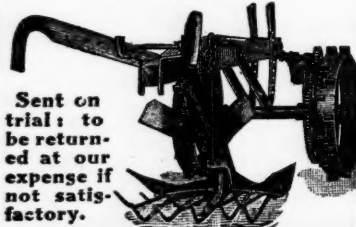
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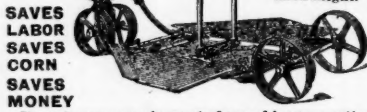
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